Exhibit 12 Part 10

Part 1 of Attachment L to the Allocation Recommendation Report (ARR2007-ARR2106)

United States' Motion to Enter Consent Decree, United States v. Alden Leeds, Inc. et al., Civil Action No. 22-7326 (D.N.J.)

ATTACHMENT L FACILITY DATA COMPUTATION SHEETS

Case 2:22-cv-07326-MCA-LDW Document 289-9 Filed 01/31/24 Page 3 of 101 PageID: 6832

Allocation Facility Cmass Calculation

21st Century Fox America, Inc. (21CFA)

100 Lister Ave

Newark

NJ

07105

Constituent Of Concern (COC)	Overland, Fate & Transport C%	Dmass Overland, Fate & Transport	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
Copper	100.00%	-	100.00%	-	0.00%	5,492.36	100.00%	-	0	1.018817E-2	0
Lead	100.00%	-	100.00%	-	0.00%	970.45	100.00%	-	0	1.018817E-2	0
Mercury	100.00%	-	100.00%	-	0.00%	2,517.07	100.00%	-	0	1.018817E-2	0
HPAHs	100.00%	0.77	100.00%	-	0.00%	-	100.00%	-	0.77	1.018817E-2	0.01
LPAHs	100.00%	567.02	100.00%	-	0.00%	-	100.00%	-	567.02	1.018817E-2	5.78
PCBs	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
DDx	100.00%	486.72	100.00%	-	0.00%	-	100.00%	-	486.72	1.018817E-2	4.96
Dieldrin	100.00%	1.11	100.00%	-	0.00%	-	100.00%	-	1.11	1.018817E-2	0.01
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0

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Allocation Facility COC Base Scores - Protocol Calculation

21st Century Fox America, Inc. (21CFA)

100 Lister Ave

Newark

NJ

07105

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	0	0	0
Lead	0.01	3,200,000.00	0	0	0
Mercury	0.95	42,000.00	0	0	0
HPAHs	0.05	240,000.00	0.01	3.269E-8	1.634E-9
LPAHs	0.01	170,000.00	5.78	3.398E-5	3.398E-7
PCBs	12.87	26,000.00	0	0	0
DDx	1.37	27,000.00	4.96	1.837E-4	2.516E-4
Dieldrin	0.13	390.00	0.01	2.900E-5	3.770E-6
Dioxins_Furans	83.92	38.00	0	2.681E-8	2.250E-6

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Alternative Calulcation

21st Century Fox America, Inc. (21CFA) 100 Lister Ave

07105 Newark NJ

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	0	0	0	0	0
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	0	0	0	0	0
Mercury	0.95	42,000.00	4,322.53	41,955.96	0	0	0	0	0
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	1.772E-7	0.01	0.03	1.772E-7	8.858E-9
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	1.882E-4	5.78	26.22	1.882E-4	1.882E-6
PCBs	12.87	26,000.00	20,066.54	25,795.56	0	0	0	0	0
DDx	1.37	27,000.00	2,516.93	26,974.36	1.934E-1	4.96	5,216.26	1.934E-1	2.649E-1
Dieldrin	0.13	390.00	1.27	389.99	8.771E-1	0.01	342.04	8.771E-1	1.140E-1
Dioxins_Furans	83.92	38.00	3,729.82	0.00	2.681E-8	0	0	2.681E-8	2.250E-6

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Facility Bypass Information

21st Century Fox America, Inc. (21CFA) 100 Lister Ave Newark NJ 07105

Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Newark Bay	Bypass	ass 0.00% 0.00%		Did not discharge waste into the Passaic river

Discharge Calcs		
	POTW Discharge Information	COMMENTS/NOTES
	gal discharged per day/week/month	2.8 Acres
	# hours/per day discharged	Organic Chemical Production All capitage water water water and process water discharged to the saver. No routes of direct entry to the Bassaic
5	#days/week discharged	All sanitary water, wastewater and process water discharged to the sewer. No routes of direct entry to the Passaic River. FDR
	#weeks/yr discharged	Directly to PVSC no CSO or Bypass
20,287,112	calc gal/yr discharge	No information on sewer discharge sampling or flowrates - USING SUN CHEMICAL TO ESTIMATE
	Yr Ops started	
	Yr Ops ceased	According to March 2018 Documentation of Environmental Indicator Determination, there are no current
33	calc #yrs facility operated	or known historic site related surface or waste water conveyances to the Passaic River
C(C-)		
Copper (Cu)	#yrs facility discharged	Estimated based on Sun Chemical
	calc mg/L COC discharged	Estimated based on sun Chemical
3.785		
	kg per mg (Merck Index)	
	calc kg COC discharged	
Lead (Pb)		
		Estimated based on Sun Chemical
	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
Mercury (Hg)		
	#yrs facility discharged	Estimated based on Sun Chemical
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index) calc kg COC discharged	
HPAHs	core ng core distribiliged	
	#yrs facility discharged	
	calc mg/L O&G	No Historic Use of PAHs on site
	% O&G that is considered PAHs	
-	calc mg/L HPAHs	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index) calc kg COC discharged	
LPAHs	care ng coe distribiged	<u> </u>
	#yrs facility discharged	
	calc mg/L O&G	No Historic Use of PAHs on site
10%	% O&G that is considered PAHs	
-	calc mg/L LPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index) calc kg COC discharged	
PCBs	tait kg COC distrialged	
	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
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33	#yrs facility discharged within DDx Timeline calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
	#yrs facility discharged within Dieldrin Timeline	
•	calc mg/L COC discharged	
2 705		
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
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21st Century Fox America DMass formated for report 1 ARR2012 POTW_PVSC

Discharge Calcs	Direct Discharge Information 4.08 FEET/YEAR AVERAGE PRECIPITATION	ASSUMPTIONS, REFERENCES Long term average annual precipitation includes floods and hurricane events occurring over time.	COMMENTS/NOTES Data from Rutgers University.
	2.8 ACRES - TOTAL SITE AREA (acres)	FDR page 1	
	1.0 ACRES - AFFECTED AREA	Rough estimate of site area with exposed fill based on aerial photographs and Google Earth.	
	4,046.86 METERS ² /ACRE	photographs and doogle Lattii.	
	4,047 METERS ² (AFFECTED AREA)		
	0.0001 METERS/YEAR (ERODED SOIL THICKNESS)	For this estimate, used a surface soil erosion rate of 0.1 mm/year, or 0.004 inches/year.	
	0 METERS ³ /YEAR (ERODED SOIL VOLUME)	VOLUME/YEAR DISCHARGED	
	1939 Year site operations began	FDR page 1	
	1974 Year site processing and storage operations ceased	FDR page 1	
	35 NUMBER YEARS DISCHARGE		
	¹⁴ METERS ³ (TOTAL SOIL VOLUME DISCHARGED OVER TIME)		
	1,963 KG/M ³ SOIL DENSITY	Silt/Sand/Gravel, Dark Brown Blend. Bulk density range 1442 KG/M³ to 2483 KG/M³, so use average. (http://structx.com/Soil_Properties_002.html)	
	27,797 KILOGRAMS (TOTAL SOIL DISCHARGED OVER TIME)		
		The site is located on regional Historic Fill (FDR page 17)	
Copper (Cu)	35 VEARS DISCHARGED		
	35 YEARS DISCHARGED 0 MG/KG (MAX CONCENTRATION)	Maximum detected concentration of copper in soils 281 ppm (FDR; PAP-00026600, PAS-00107134, PAP-00026528, PAS-00106903). Set to 0 since less than HF.	
	0.000001 kg per mg (Merck Index)	oozoosy, see to o since less than in .	
Lead (Pb)	0 KILOGRAMS DISCHARGED		
Leau (FD)	35 YEARS DISCHARGED		
	0 MG/KG (AVERAGE CONCENTRATION)	Maximum detected concentration of lead in soils 671 ppm (FDR; PAS-00107134, PAP-00026528, PAS-00106903). Set to 0 since less than HF.)
	0.000001 kg per mg (Merck Index)		
	0 KILOGRAMS DISCHARGED		

Mercury (Hg) 35 YEARS DISCHARGED 0.0 MG/KG (MAX CONCENTRATION) 0.000001 kg per mg (Merck Index) KILOGRAMS DISCHARGED PAHs (listed in Benzo(a)pyrene Equivalent conversion table) 35 YEARS DISCHARGED **27.6** MG/KG (TOTAL PAH MAX CONCENTRATION) 0.000001 kg per mg (Merck Index) KILOGRAMS DISCHARGED PAHs (others detected) 35 YEARS DISCHARGED 89 MG/KG (TOTAL PAH MAX CONCENTRATION) 0.000001 kg per mg (Merck Index) KILOGRAMS DISCHARGED 35 YEARS DISCHARGED 0 MG/KG (MAX OF REPORTED CONCENTRATIONS) 0.000001 kg per mg (Merck Index) KILOGRAMS DISCHARGED 35 YEARS DISCHARGED within DDx Timeline 17510 MG/KG (MAX CONCENTRATION) 3.785 L per gallon (Merck Index) 0.000001 kg per mg (Merck Index) 487 KILOGRAMS DISCHARGED Dieldrin 24 YEARS DISCHARGED within Dieldrin Timeline 40 MG/KG (MAX CONCENTRATION)

3.785 L per gallon (Merck Index)
0.000001 kg per mg (Merck Index)

35 YEARS DISCHARGED

0.000001 kg per mg (Merck Index) 0.00012 calc kg COC discharged

KILOGRAMS DISCHARGED

0.0042 MG/KG (MAX CONCENTRATION)

Maximum detected concentration of mercury in soils 3.6 ppm (PAS-00107134). Set to 0 since less than HF.

Total concentration of PAH compounds for Benzo(a)pyrene Equivalent https://floridadep.gov/waste/petroleum-restoration/documents/benzo-pyrene-equivalents-conversion-table-one-sample.

Data below the Benzo(a)pyrene Equivalent Table.

LMW PAH concentrations reflect a single sample and HMW PAHs are remvoed from the summation of LMW PAHs.

Historic fill was not a consideration for PAH concentrations for the purpose of this calculation.

Sum of Other PAH compound maximum concentrations listed in documents.

NJDEP concluded that PCBs are not a site COC in 2016 (PAP
00026459).

FDR does not indicated PCBs in site soils.

DDx timeframe 1940-1974 (35 years).

DDx concentrations reflect a single sample, ABUST-S1-0.5-2.5 (PAP-00026610). Sum of 510 mg/kg 4,4-DDE, and 17000 mg/kg 4,4-DDT.

Dieldrin timeframe 1950-1974 (24 years). The end date for years discharge reflects the year the site was sold. Sample ABUST S1 (PAP-00026610,6495)

2,4-D produced onsite

Detected in range of 0.36-4.2 ug/kg in soils (FDR, PAS-00107212)

	Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
Sample LA-4-4 (2.5-3.0 ft	Benzo(a)pyrene	21.000	1.0	21.0000
bgs) (PAP-00026526)	Benzo(a)anthracene	25.000	0.1	2.5000
Carcinogenic PAH	Benzo(b)fluoranthene	24.000	0.1	2.4000
concentrations have been	` '	12.000	0.01	0.1200
updated to reflect a single sample. Historic fill was not a consideration for PAH				
concentrations for the purpose of this calculation.		22,000	0.001	0.0220
parpose or this calculation.	Dibenz(a,h)anthracene	22.000 0.840	0.001 1.0	0.0220 0.8400
	Dibenz(a,njantinacene	0.840	1.0	0.8400
	Indeno(1,2,3-cd)pyrene	7.300	0.1	0.7300

DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg

27.6

	Total Benzo(a)p	yrene Equivalents
Sample LA-4-4 (2.5-3.0 ft l	ogs) (PAP-00026526)	
Anthracene	13	
Acenaphthene	3.4	
Acenaphthylene	4.5	
Fluorene	8.6	
Naphthalene	4.1	
Phenanthrene	53	
2-Methylnaphthalene	2.4	
SUM	89	

Dioxins/Furans

SUMMARY CMASS ESTIMATES: 0.00 kg Copper 0.00 kg Lead 0.00 kg Mercury 0.77 kg PAHs (Benzo(a)pyrene Equivalent) 2.47 kg PAHs (Other) 0.00 kg PCBs 486.72 kg DDx 1.11 kg Dieldrin 0.0001 kg Dioxins/Furans

491.08 MASS (KG) DISCHARGED FROM SURFACE SOIL

Discharge Calcs

Direct Discharge Information 1939 Year site operations began

1974 Year site processing and storage operations ceased

NOTES, COMMENTS, REFERENCES

FDR page 1

FDR page 1

number of PAHs.

10% = 16.13 kg/yr

16.13 kg/yr x 35 years = 564.55 kg

Cresol could be made from coal tar, which contains a

Randell Inteview dated 1/25/1994 stated he and other works routinely dumped five gallon pails of waste cresol into the Passaic River (PAS-00003917)

Rothberg's Affidavit dated 2/21/06 states ".....it made no sense for employees to hand carry buckets of process waste to the river. He never observed nor had any other knowledge of any employess carrying buckets of waste from the facility across neighboring properties to the river. "I cannot conceive of any reason that anyone would have done such a thing, when the troughs and other disposal areas at the facility provided a ready means for waste disposal and were within approximately fifteen feet of any location within the facility. Nor was waste cresol, which Mr. Randell said was in the buckets, generated at the Newark Plant." (PAP-00027867-68, PAP-00027868)

According to Google Maps there is a road that goes to the river just west of the property.

Assume buckets of waste cresol dumped 1 time per year for years of

operation

PAHs

35 YEARS DISCHARGED

0.000001 kg per mg (Merck Index) 564.55 KILOGRAMS DISCHARGED

MG/KG (TOTAL PAH MAX CONCENTRATION)

35 NUMBER YEARS DISCHARGE

SUMMARY CMASS ESTIMATES:

564.55 kg PAHs MAX

564.55 MASS (KG) DISCHARGED BY OVERLAND FLOW

Assume 5 gallons buckets of Cresol Dumped. 8 buckets per year = 40 gallons per year Assume Cresol contains 10% PAHs Cresol: 8.89#/gallon 40 gallons x 8.89#/gallon x .453592 kg/# = 161.30 kg/yr x

Chrysene	0.001	0.0000
Dibenz(a,h)anthracene	1.0	0.0000
Indeno(1,2,3-cd)pyrene	0.1	0.0000

DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg Total Benzo(a)pyrene Equivalents = 0.0 For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)
Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Protocol Calculation

21st Century Fox America, Inc. (21CFA)

100 Lister A	lve		Newark	NJ	07105				
Facility BS	CUF	CUF_Catego	ry		С	UF_NOTES	COF	COF_NOTES	Facility Adjusted BS
2.580E-4	5.0%	Occasional Noncor	du (P. ur bl: 00 we	ue to several rail lines AS-00107038). Form apaved area at the proack and smelled stror 0106689). According ould routinely dump to	that crossed the facer Montrose Chemic operty was heavily congly of cresol, and the to the interview of I five-gallon pails of w	d during 1914 (possibly earlier) through the mid-1980s ility, based on buried rail ties discovered at the site rail employee Oscar Randall noted that much of the contaminated with spilled substances. The soil was jet e groundwater was discolored and smelled (PAS-Randell dated January 25, 1994, he and other workers aste cresol into the Passaic River (PAS-00003917) - action that NOVs issued to facility		0% Cooperation with conduct of allocation and request for related information -20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities	5 2.193E-4
								AP_ABS	2.193E-4

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)
Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Allocation Calculation

21st Century Fox America, Inc. (21CFA)

100 Lister A	Ave		Newark	NJ	07105					
Facility BS	CUF	CUF_Catego	ory		C	UF_NOTES	COF COF_NOTES Facili Adjuste			
3.789E-1	5.0%	Occasional Noncor	du (P. un bla 00 wa	te to several rail lines AS-00107038). Form upaved area at the proack and smelled stror (106689). According buld routinely dump to	that crossed the facer Montrose Chemic operty was heavily congly of cresol, and the to the interview of lifeyer gallon pails of w	d during 1914 (possibly earlier) through the mid-1980s ility, based on buried rail ties discovered at the site cal employee Oscar Randall noted that much of the contaminated with spilled substances. The soil was jet e groundwater was discolored and smelled (PAS-Randell dated January 25, 1994, he and other workers aste cresol into the Passaic River (PAS-00003917) - ention that NOVs issued to facility		0% Cooperation with conduct of allocation and requests for related information -20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities	3.221E-1	
	<u> </u>							AP_ABS	3.221E-1	

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Allocation Facility Cmass Calculation

Alden Leeds Inc. 55 Jacobus Avenue Kearny NJ

Constituent Of Concern (COC)	Overland, Fate & Transport C%	Dmass Overland, Fate & Transport	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
Copper	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Lead	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Mercury	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
HPAHs	100.00%	-	100.00%	-	0.00%	20.17	100.00%	-	0	1.018817E-2	0
LPAHs	100.00%	-	100.00%	-	0.00%	13.45	100.00%	-	0	1.018817E-2	0
PCBs	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
DDx	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0

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Allocation Facility COC Base Scores - Protocol Calculation

Alden Leeds Inc. 55 Jacobus Avenue NJ Kearny

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	0	0	0
Lead	0.01	3,200,000.00	0	0	0
Mercury	0.95	42,000.00	0	0	0
HPAHs	0.05	240,000.00	0	0	0
LPAHs	0.01	170,000.00	0	0	0
PCBs	12.87	26,000.00	0	0	0
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

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Allocation Facility COC Base Scores - Alternative Calulcation

Alden Leeds Inc.	55 Jacobus Avenue	Kearny	NJ	

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	0	0	0	0	0
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	0	0	0	0	0
Mercury	0.95	42,000.00	4,322.53	41,955.96	0	0	0	0	0
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	0	0	0	0	0
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	0	0	0	0	0
PCBs	12.87	26,000.00	20,066.54	25,795.56	0	0	0	0	0
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Facility Bypass Information

Alden Leeds Inc. 55 Jacobus Avenue Kearny NJ

Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Newark Bay	Bypass	0.00%	0.00%	Did not discharge waste into the Passaic river

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
	gal discharged per day/week/month	Facility used for Office Space and Storage of Raw Materials and Finished Product. No Hazardous Waste
	# hours/per day discharged	No information on sewer discharge
	#days/week discharged	1987 violation order form Hudson Regional Health Commission for connection of septic holding tank to storm drain system
	#weeks/yr discharged	
411,250	calc gal/yr discharge	
1002	Vr.Onc started	
	Yr Ops started Yr Ops ceased	
	calc #yrs facility operated	
Copper (Cu)		
12	#yrs facility discharged	
	calc mg/L COC discharged	
3.785		
	kg per mg (Merck Index)	
	calc kg COC discharged	
Lead (Pb)	#yrs facility discharged	
12	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Mercury (Hg)		
12	#yrs facility discharged	
-	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
HPAHs 12	H. wa facility discharged	
	#yrs facility discharged calc mg/L O&G	Based on Alden Leads Hackensack Ave
10%		Dased off Alueti Leads Hackerisack Ave
	% PAHs considered as HPAHs	
1.1		
3.785	L per gallon (Merck Index)	
0.000001		
	calc kg COC discharged	
LPAHs		
12		
	calc mg/L O&G % O&G that is considered PAHs	Based on Alden Leads Hackensack Ave
	% PAHs considered as LPAHs	
0.7		
3.785		
	kg per mg (Merck Index)	
	calc kg COC discharged	
PCBs		
	#yrs facility discharged within PCBs Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
- DDv	calc kg COC discharged	
DDx -20	#vrs facility discharged within DDx Timeline	
-20	calc mg/L COC discharged	
3.785		
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	

Alden Leeds Jacobus Ave DMass formatted for report 1 ARR2023 POTW_PVSC

Dioxins/Furans		
	#yrs facility discharged	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
13	#yrs facility discharged within 2,4-D Timeline	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
-7	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
-17	#yrs facility discharged within 2,4,6-TCP Timeline	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
	calc kg COC discharged	
Summary DMassCOC for POTW:		
-	kg Copper	
-	kg Lead	
-	kg Mercury	
20.17	kg HPAHs	
13.45	kg LPAHs	
	kg PCBs	
1	kg DDx	
	kg Dieldrin	
1	kg Dioxins/Furans	
•	_	

Alden Leeds Jacobus Ave DMass formatted for report 2 ARR2024 POTW_PVSC

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Allocation Facility Cmass Calculation

Alden Leeds Inc. 100 Hakensack Avenue Newark NJ

Constituent Of Concern (COC)	Overland, Fate & Transport	Dmass Overland, Fate &	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
	С%	Transport									
Copper	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Lead	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Mercury	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
HPAHs	100.00%	-	100.00%	-	0.00%	21.85	100.00%	54.0	53.96	1.018817E-2	0.55
LPAHs	100.00%	-	100.00%	-	0.00%	14.57	100.00%	36.0	35.97	1.018817E-2	0.37
PCBs	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
DDx	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Protocol Calculation

Alden Leeds Inc. 100 Hakensack Avenue NJ Newark

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	0	0	0
Lead	0.01	3,200,000.00	0	0	0
Mercury	0.95	42,000.00	0	0	0
HPAHs	0.05	240,000.00	0.55	2.291E-6	1.145E-7
LPAHs	0.01	170,000.00	0.37	2.156E-6	2.156E-8
PCBs	12.87	26,000.00	0	0	0
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Alternative Calulcation

en Leeds Inc.	100 Hakensack Avenue	Newark	NJ	
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Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	0	0	0	0	0
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	0	0	0	0	0
Mercury	0.95	42,000.00	4,322.53	41,955.96	0	0	0	0	0
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	1.241E-5	0.55	2.43	1.241E-5	6.207E-7
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	1.194E-5	0.37	1.66	1.194E-5	1.194E-7
PCBs	12.87	26,000.00	20,066.54	25,795.56	0	0	0	0	0
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Facility Bypass Information

Alden Leeds Inc. 100 Hakensack Avenue Newark NJ

Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Newark Bay	Bypass	0.00%	0.00%	Did not discharge waste into the Passaic river

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
	gal discharged per day/week/month	Very limited information. Facility repackaged pool chemicals
24	# hours/per day discharged	1994 PVSC Permit
	#days/week discharged	111,250 gallons sanitary water and 300,000 gallons of process wastewater
250		Pilade and the state of the sta
411,250	calc gal/yr discharge PAS000007	Discharged wastewater to sanitary sewer and cooling water to storm sewer/river/ditch
1003	Yr Ops started	
	Yr Ops ceased	
	calc #yrs facility operated	
	, , , , , , , , , , , , , , , , , , , ,	
Copper (Cu)		
13	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785		
0.00001	kg per mg (Merck Index)	
Lead (Pb)	calc kg COC discharged	
	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Mercury (Hg)		
13	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index) kg per mg (Merck Index)	
0.00001	calc kg COC discharged	
- HPAHs	core ng core distributed	
	#yrs facility discharged	Only sampling data from 1994
	calc mg/L O&G PAS0000007	18 mg/l Oil & Grease
10%	% O&G that is considered PAHs	13.3 mg/l TPH
60%	% PAHs considered as HPAHs	20.1 mg/l TOC
1.08		
3.785		
0.000001		
21.85	calc kg COC discharged	
LPAHs	Harry Contiller, all askers and	Only consulting data from 4004
	#yrs facility discharged calc mg/L O&G PAS0000007	Only sampling data from 1994 18 mg/l Oil & Grease
	% O&G that is considered PAHs	13.3 mg/I TPH
40%		20.1 mg/l TOC
0.72		· · ·
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
PCBs		
-15	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
3.785	L per gallon (Merck Index) kg per mg (Merck Index)	
3.785 0.000001	L per gallon (Merck Index)	
3.785 0.000001	L per gallon (Merck Index) kg per mg (Merck Index)	
- 3.785 0.000001 - DDX	L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged	
- 3.785 0.000001 - DDX -20 -20 -3.785	L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index)	
	L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index)	
- 3.785 0.00001 - DDx - 20 - 3.785 0.00001	L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index)	
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	L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck Index) calc kg COC discharged L per gallon (Merck Index) calc kg COC discharged L per gallon (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged L per gallon (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged L per gallon (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4,5-T Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,5-T Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility disch	
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	L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck Index) calc kg COC discharged L per gallon (Merck Index) calc kg COC discharged L per gallon (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged L per gallon (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged L per gallon (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4,5-T Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,5-T Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility disch	

Alden Leeds - Hackensack Ave DMass formated for report 1 ARR2029 POTW_PVSC

Discharge Calcs	Direct Discharge Information	COMMENTS/NOTES
	# hours/day discharged # days/week discharged	Very limited information. Facility repackaged pool chemicals
	# days/week discharged # weeks/yr discharged	1994 PVSC Permit 1,100,000 gallons of cooling water discharged to Storm sewer/ditch/river
1,100,000		
		Discharged wastewater to sanitary sewer and cooling water to storm sewer/river/ditch
1993	Yr Ops started	
2005	Yr Ops ceased	
12	calc #yrs facility operated	
Copper (Cu)		
	#yrs facility discharged	
- 2.705	calc mg/L COC discharged	
	L per gallon (Merck Index) kg per mg (Merck Index)	
-	calc kg COC discharged	
Lead (Pb)		
	#yrs facility discharged calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
Mercury (Hg)	calc kg COC discharged	
	#yrs facility discharged	
	calc mg/L COC discharged	
	L per gallon (Merck Index) kg per mg (Merck Index)	
U.000001 -	calc kg COC discharged	
HPAHs		
	#yrs facility discharged	Only sampling data from 1994
	calc mg/L O&G PAS0000007 % O&G that is considered PAHs	18 mg/l Oil & Grease 13.3 mg/l TPH
60%	% PAHs considered as HPAHs	20.1 mg/l TOC
1.08	calc mg/L HPAHs	
	L per gallon (Merck Index) kg per mg (Merck Index)	
	calc kg COC discharged	
LPAHs		
	#yrs facility discharged calc mg/L O&G PAS0000007	Only sampling data from 1994 18 mg/l Oil & Grease
	% O&G that is considered PAHs	13.3 mg/l TPH
	% PAHs considered as LPAHs	20.1 mg/I TOC
	calc mg/L LPAHs	
	L per gallon (Merck Index) kg per mg (Merck Index)	
	calc kg COC discharged	
PCBs		
-15	#yrs facility discharged within PCBs Timeline	
3.785	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx	#yrs facility discharged within DDx Timeline	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
Dieldrin	calc kg COC discharged	
	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
	L per gallon (Merck Index) kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
12	#yrs facility discharged calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
Piovin/Euran Broquesor 2.4 D	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D 13	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index) calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T	,	
-7	#yrs facility discharged within 2,4,5-T Timeline	
- 3.785	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
F	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP	n - 6 - 9 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4	
-17	#yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
	calc kg COC discharged	
Summary DMassCOC for Direct Discharge:		
-	kg Copper	
<u> </u>	kg Lead kg Mercury	
	kg HPAHs	
53.96		
35.97	kg LPAHs	
35.97 -	kg PCBs	
35.97 - -	kg PCBs kg DDx	
35.97 - -	kg PCBs	

Alden Leeds - Hackensack Ave DMass formated for report 3 ARR2030 Direct_SW_Passaic

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Allocation Facility Cmass Calculation

2145 McCarter Highway Alden Leeds Inc. 07104 Newark NJ

Constituent Of Concern (COC)	Overland, Fate & Transport C%	Dmass Overland, Fate & Transport	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
Copper	100.00%	-	100.00%	-	8.23%	-	100.00%	-	0	1.018817E-2	0
Lead	100.00%	-	100.00%	-	8.23%	-	100.00%	-	0	1.018817E-2	0
Mercury	100.00%	-	100.00%	-	8.23%	-	100.00%	-	0	1.018817E-2	0
HPAHs	100.00%	-	100.00%	-	8.23%	13.45	100.00%	31.5	32.58	1.018817E-2	0.33
LPAHs	100.00%	-	100.00%	-	8.23%	8.97	100.00%	21.0	21.72	1.018817E-2	0.22
PCBs	100.00%	-	100.00%	-	8.23%	-	100.00%	-	0	1.018817E-2	0
DDx	100.00%	-	100.00%	-	8.23%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	8.23%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	8.23%	-	100.00%	-	0	1.018817E-2	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Protocol Calculation

Alden Leeds Inc. 2145 McCarter Highway 07104 NJ Newark

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	0	0	0
Lead	0.01	3,200,000.00	0	0	0
Mercury	0.95	42,000.00	0	0	0
HPAHs	0.05	240,000.00	0.33	1.383E-6	6.916E-8
LPAHs	0.01	170,000.00	0.22	1.302E-6	1.302E-8
PCBs	12.87	26,000.00	0	0	0
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Alternative Calulcation

den Leeds Inc.						2145 McCar	ter Highway		Newark	NJ	07104
Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score		
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	0	0	0	0	0		
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	0	0	0	0	0		
Mercury	0.95	42,000.00	4,322.53	41,955.96	0	0	0	0	0		
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	7.496E-6	0.33	1.47	7.496E-6	3.748E-7		
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	7.210E-6	0.22	1.	7.210E-6	7.210E-8		
PCBs	12.87	26,000.00	20,066.54	25,795.56	0	0	0	0	0		
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0		
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0		
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0		

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Facility Bypass Information

Alden Leeds Inc. 2145 McCarter Highway Newark NJ 07104

Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Verona Ave	CSO	1.27%	21.70%	
2	Verona Ave	Bypass	7.95%	100.00%	

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
ļ	gal discharged per day/week/month	No information or data regarding CSO discharges.
1	# hours/per day discharged	PAS00000045 NJDEP Memorandum from 1993 states "Floor sweepings of chlorinating agents were added to
1		the facility wastewater treatment system and discharged to the combined sewer one time per week." Assumed no COCs involved.
	#days/week discharged	Utilizing Alden Leads Hackensack Ave to estimate
	#weeks/yr discharged	
411,250	calc gal/yr discharge	
1964	Yr Ops started	
	Yr Ops ceased	
	calc #yrs facility operated	
Copper (Cu)		
8	#yrs facility discharged calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Lead (Pb)	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Mercury (Hg)	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
- LIBAUC	calc kg COC discharged	
HPAHs 8	#yrs facility discharged	Based on Alden Leads Hackensack Avenue
	calc mg/L O&G	
10%	% O&G that is considered PAHs	
	% PAHs considered as HPAHs	
	calc mg/L HPAHs L per gallon (Merck Index)	
	kg per mg (Merck Index)	
13.45	calc kg COC discharged	
LPAHs		
	#yrs facility discharged calc mg/L O&G	Based on Alden Leads Hackensack Avenue
	% O&G that is considered PAHs	
	% PAHs considered as LPAHs	
0.7	calc mg/L LPAHs	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
PCBs 8.97	calc kg COC discharged	
	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index) calc kg COC discharged	
DDx		
	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index) kg per mg (Merck Index)	
0.000001	calc kg COC discharged	
Dieldrin		
	#yrs facility discharged within Dieldrin Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index) kg per mg (Merck Index)	
0.000001	calc kg COC discharged	
Dioxins/Furans		
8	#yrs facility discharged	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index) kg per mg (Merck Index)	
- 0.000001	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
8	#yrs facility discharged within 2,4-D Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index) kg per mg (Merck Index)	
0.00001	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
	#yrs facility discharged within 2,4,5-T Timeline	
- 3 785	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
	#yrs facility discharged within 2,4,6-TCP Timeline	
3 785	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
Commence District Control	I	
Summary DMassCOC for POTW:	kg Conner	
	kg Copper kg Lead	
	kg Mercury	
13.45	kg HPAHs	
	kg LPAHs	
	kg PCBs	
	kg DDx	

Alden Leeds McCarter Hwy DMass formatted for report 1 ARR2035 POTW_PVSC

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Final 12/28/2020

- kg Dieldrin
- kg Dioxins/Furans

Alden Leeds McCarter Hwy DMass formatted for report 2 ARR2036 POTW_PVSC

Disabassa Calas		
Discharge Calcs	Direct Discharge Information	COMMENTS/NOTES
	# hours/day discharged	Utilizing Alden Leads Hackensack Ave to Estimate
	# days/week discharged	
	# weeks/yr discharged	
1,100,000	# gals/yr directly discharged	
1964	Yr Ops started	
1971		
7		
Copper (Cu)		
7	#yrs facility discharged	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.00001	kg per mg (Merck Index) calc kg COC discharged	
Lead (Pb)	tait kg COC distriarged	
7	#yrs facility discharged	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Mercury (Hg)		
7	#yrs facility discharged	
	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
0.00001	calc kg COC discharged	
HPAHs		
	#yrs facility discharged	
18.00	calc mg/L O&G	Based on Alden Leads Hackensack Ave
	% O&G that is considered PAHs	
	% PAHs considered as HPAHs	
1.08	calc mg/L HPAHs	
	Languaglan (Marak Indox)	
3.785	L per gallon (Merck Index) kg per mg (Merck Index)	
	kg per mg (Merck Index) calc kg COC discharged	
LPAHs S1.46	calc kg coc distriarged	
	#yrs facility discharged	
	calc mg/L O&G	Based on Alden Leads Hackensack Ave
	% O&G that is considered PAHs	
	% PAHs considered as LPAHs	
	calc mg/L LPAHs	
0.000001	L per gallon (Merck Index) kg per mg (Merck Index)	
20.98		
PCBs		
	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.00001	kg per mg (Merck Index) calc kg COC discharged	
DDx	tait kg COC distriarged	
	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin	thurs facility discharged within Dieldrin Timeline	
	#yrs facility discharged within Dieldrin Timeline	
Dieldrin 8	#yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged L per gallon (Merck Index)	
Dieldrin 8 8 3.785	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index)	
Dieldrin 8	calc mg/L COC discharged L per gallon (Merck Index)	
Dieldrin 8 8	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged	
Dieldrin 8 8	calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged	
Dieldrin	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged	
Dieldrin 8 8	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck Index)	
Dieldrin 8 8	lacl mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) kg per mg (Merck index)	
Section Sect	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck Index)	
Dieldrin 8 3.785 3.785 0.000001 Dioxins/Furans 7 . 3.785 0.000001 Dioxin/Furan Precursor - 2,4-D	lacl mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) kg per mg (Merck index)	
Seldrin	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged	
Dieldrin 8 8	calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) kg per mg (Merck index) ealc kg COC discharged #yrs facility discharged discharged L per gallon (Merck index) L per gallon (Merck index)	
Dieldrin	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged #yrs facility discharged calc mg/L COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index)	
Dieldrin	calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) kg per mg (Merck index) ealc kg COC discharged #yrs facility discharged discharged L per gallon (Merck index) L per gallon (Merck index)	
Dieldrin	calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged calc mg/L COC discharged calc mg/L COC discharged calc mg/L COC discharged calc mg/L COC discharged calc kg COC discharged	
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Section Sect	calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged #yrs facility discharged L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged L per gallon (Merck index) calc kg COC discharged #yrs facility discharged within 2,4,5-T Timeline calc mg/L COC discharged L per gallon (Merck index)	
Dieldrin	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged #yrs facility discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged L per gallon (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4,5-T Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index)	
Dieldrin	calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged #yrs facility discharged L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged L per gallon (Merck index) calc kg COC discharged #yrs facility discharged within 2,4,5-T Timeline calc mg/L COC discharged L per gallon (Merck index)	
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Dieldrin	calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged L per gallon (Merck index) kg per mg (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) kg PCBs kg PCBs kg PCBs	
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Alden Leeds McCarter Hwy DMass formatted for report 3 ARR2037 Direct_SW_Passaic

Facility Base Scores, Culpability	, Case 2:22-cy-07326-MCA-LPW t Docu	ument 289-9 - Filed 01/31/24 - Pag and Adjusted Base Scores	e 33 of 101 Page D: 6862 on
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Alden Leeds Inc.

2145 McCa	rter Hi	ghway	Newark	NJ	07104				
Facility BS	CUF	CUF_Catego	ry		CUF_NOTES			COF_NOTES	Facillty Adjusted BS
8.217E-8	0.0%	Historically Compliant or	No Evidence	No information on	violations or sloppy prac	ices was identified in the available file material.	20.0%	20% Failed to participate in conduct of allocation as offered by EPA	9.861E-8
100 Hakens	ack Av	enue	Newark	NJ					
Facility BS	CUF	CUF_Catego	ry		C	JF_NOTES	COF	COF_NOTES	Facility Adjusted BS
1.361E-7	5.0%	Occasional Noncon	npliance	large quantity" of c presented an Awar	nlorinated cyanuric acid d of Excellence to Alden cember 31, 2005 withou	oyed the building and resulted in the release of "a nto the Second River (PAS-00000022). PVSC eeds-Hackensack Ave. for operations from January incurring a reporting or effluent violation (PAP-	20.0%	20% Failed to participate in conduct of allocation as offered by EPA	1.701E-7
55 Jacobus	Avenu	e	Kearny	NJ					
Facility BS	CUF	CUF_Catego	ry		CUF_NOTES			COF_NOTES	Facility Adjusted BS
0	5.0%	Occasional Noncon	npliance	dated April 21, 198	7, a "violation order" wo	pared by the Hudson Regional Health Commission, uld be issued to Alden Leeds regarding the orm drain system at the 55 Jacobus Avenue facility	20.0%	20% Failed to participate in conduct of allocation as offered by EPA	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

Alden Leeds Inc.

2145 McCa	rter Hi	ghway	Newark	NJ	07104				
Facility BS	CUF	CUF_Catego	ry		CUF_NOTES			COF_NOTES	Facility Adjusted BS
4.469E-7	0.0%	Historically Compliant or	No Evidence	No information on	violations or sloppy prac	ices was identified in the available file material.	20.0%	20% Failed to participate in conduct of allocation as offered by EPA	5.363E-7
100 Hakens	ack Av	enue	Newark	NJ					
Facility BS	CUF	CUF_Catego	ry		C	COF	COF_NOTES	Facility Adjusted BS	
7.401E-7	5.0%	Occasional Noncon	npliance	large quantity" of co	nlorinated cyanuric acid d of Excellence to Alden cember 31, 2005 withou	oyed the building and resulted in the release of "a nto the Second River (PAS-00000022). PVSC eeds-Hackensack Ave. for operations from January incurring a reporting or effluent violation (PAP-	20.0%	20% Failed to participate in conduct of allocation as offered by EPA	9.252E-7
55 Jacobus	Avenu	e	Kearny	NJ					
Facility BS	CUF	CUF_Catego	ry		CUF_NOTES			COF_NOTES	Facillty Adjusted BS
0	5.0%	Occasional Noncon	npliance	dated April 21, 198	7, a "violation order" wo	pared by the Hudson Regional Health Commission, uld be issued to Alden Leeds regarding the orm drain system at the 55 Jacobus Avenue facility	20.0%	20% Failed to participate in conduct of allocation as offered by EPA	0

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Allocation Facility Cmass Calculation

Alliance Chemical Inc. 33 Avenue P 07105 Newark NJ

Constituent Of Concern (COC)	Overland, Fate & Transport	Dmass Overland, Fate &	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
	C%	Transport					•,0		•		
Copper	100.00%	221.17	100.00%	-	0.00%	17,767.89	100.00%	2,865.8	3,086.96	1.018817E-2	31.45
Lead	100.00%	354.83	100.00%	-	0.00%	3,333.18	100.00%	537.6	892.44	1.018817E-2	9.09
Mercury	100.00%	18.87	100.00%	-	0.00%	9.71	100.00%	1.6	20.44	1.018817E-2	0.21
HPAHs	100.00%	22.61	100.00%	-	0.00%	73,646.46	100.00%	11,878.5	11,901.07	1.018817E-2	121.25
LPAHs	100.00%	36.67	100.00%	-	0.00%	49,097.64	100.00%	7,919.0	7,955.64	1.018817E-2	81.05
PCBs	100.00%	5.54	100.00%	-	0.00%	-	100.00%	-	5.54	1.018817E-2	0.06
DDx	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Protocol Calculation

Alliance Chemical Inc. 33 Avenue P 07105 Newark NJ

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	31.45	1.498E-5	1.033E-5
Lead	0.01	3,200,000.00	9.09	2.841E-6	2.841E-8
Mercury	0.95	42,000.00	0.21	4.957E-6	4.709E-6
HPAHs	0.05	240,000.00	121.25	5.052E-4	2.526E-5
LPAHs	0.01	170,000.00	81.05	4.768E-4	4.768E-6
PCBs	12.87	26,000.00	0.06	2.171E-6	2.794E-5
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Alternative Calulcation

Alliance Chemical Inc.	33 Avenue P	Newark	NJ	07105	

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	1.115E-2	31.45	23,374.85	1.115E-2	7.691E-3
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	3.093E-3	9.09	9,887.05	3.093E-3	3.093E-5
Mercury	0.95	42,000.00	4,322.53	41,955.96	4.728E-3	0.21	198.36	4.728E-3	4.491E-3
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	2.738E-3	121.25	535.91	2.738E-3	1.369E-4
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	2.641E-3	81.05	367.85	2.641E-3	2.641E-5
PCBs	12.87	26,000.00	20,066.54	25,795.56	2.761E-4	0.06	7.12	2.761E-4	3.553E-3
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Facility Bypass Information

Alliance Chemical Inc. 33 Avenue P Newark NJ 07105

Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Newark Bay	Bypass	0.00%	0.00%	Did not discharge waste into the Passaic river

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
	gal discharged per day/week/month	
<u> </u>	# hours/per day discharged	
	#days/week discharged #weeks/yr discharged	
24.824.386	#gals/yr directly discharged (FDR) (PAS00049812, 49890; PAS-00049812,	
2 1,02 1,020	49893; PAS-00072817, 72895; PAP-00066317, 66320, 66369)	
1970	Yr Ops started PVSC discharge	
	Yr Ops ceased	
31	calc #yrs facility operated	
Copper (Cu)		
	#yrs facility discharged	
6.10	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
Lead (Pb)	#yrs facility discharged	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
Mercury (Hg)		
	#yrs facility discharged	
	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
9.7	calc kg COC discharged	
HPAHs		
31	#yrs facility discharged	
	calc mg/L O&G	
	% O&G that is considered PAHs	
	% PAHs considered as HPAHs calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
73,646.5	calc kg COC discharged	
LPAHs		
	#yrs facility discharged	
	calc mg/L O&G % O&G that is considered PAHs	
	% PAHs considered as LPAHs	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
PCBs		
8	#yrs facility discharged within PCBs Timeline	
3 785	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
3	#yrs facility discharged within DDx Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index) calc kg COC discharged	
Dieldrin	care ng coc assentinged	
	#yrs facility discharged within Dieldrin Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
	calc kg COC discharged	
Dioxins/Furans	#yrs facility discharged	
31	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D	Book for the discharge deviation 2.4.8 TO	
32	#yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged	
3 700	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
16	#yrs facility discharged within 2,4,5-T Timeline	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index) kg per mg (Merck Index)	
5.000001	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
	#yrs facility discharged within 2,4,6-TCP Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
	· ·	
Summary DMassCOC for POTW:		
	kg Copper	
	kg Lead	
10	kg Mercury	
	kg HPAHs	
	kg LPAHs	
	kg PCBs	
	kg Dieldrin	
	kg Dioxins/Furans	

Alliance Chemical formatted for report 1 ARR2044 POTW_PVSC

Discharge Calcs		COMMENTS/NOTES
	# hours/day discharged	
	# days/week discharged # weeks/yr discharged	
24,824,386	# gals/yr directly discharged (FDR) (PAS00049812, 49890; PAS-00049812,	assume effluent chars prior to PVSC hookup would have been similar to post PVSC hookup
, , , , , , , , , , , , , , , , , , , ,	49893; PAS-00072817, 72895; PAP-00066317, 66320, 66369)	
4.00	ft; 30yr average annual precipitation per Rutgers information	
4.00	acres	
43,560	ft2 per acre	
1005	V 0 (1990)	
	Yr Ops started (FDR) Yr Ops connected to PVSC (FDR)	
	calc #yrs facility discharged to Plum Creek	
	-	
Copper (Cu)		
5	#yrs facility discharged calc mg/L COC discharged (FDR) (PAS-00072817, 72895; PAP-00066317,	
0.10	66320, 66369)	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
2,866 Lead (Pb)	calc kg COC discharged	
	#yrs facility discharged	
1.14	calc mg/L COC discharged (FDR) (PAS-00072817, 72895; PAP-00066317,	
	66320, 66369)	
	L per gallon (Merck Index)	
	kg per mg (Merck Index) calc kg COC discharged	
Mercury (Hg)		
5	#yrs facility discharged	
0.003	calc mg/L COC discharged (FDR) (PAS-00072817, 72895; PAP-00066317, 66320, 66369)	
2 795	66320, 66369) L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
2	calc kg COC discharged	
HPAHs	thus facility discharged	
421	#yrs facility discharged calc mg/L O&G discharged; (FDR) (PAS-00072817, 72895; PAP-00066317,	
1	66320, 66369, PAS-00049812, 49893; PAP-00066317, 66416)	
	% O&G considered as PAHs % COC in PAHs	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
	calc kg COC discharged	
LPAHs 5	#yrs facility discharged	
	calc mg/L O&G discharged; (FDR) (PAS-00072817, 72895; PAP-00066317,	
	66320, 66369, PAS-00049812, 49893; PAP-00066317, 66416)	
10%	% O&G considered as PAHs % COC in PAHs	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
7,918.97 PCBs	calc kg COC discharged	
	#yrs facility discharged within PCBs Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index) calc kg COC discharged	
DDx	core ng coc discharged	
6	#yrs facility discharged within DDx Timeline	
0.000	calc mg/L COC discharged L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
6	#yrs facility discharged within Dieldrin Timeline	
2 705	calc mg/L COC discharged L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans	th was fire illes all subsequents	
5	#yrs facility discharged calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
Diavin/Euran Procursor 2 6 5	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D	#yrs facility discharged within 2,4-D Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index) calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T	care no core discharged	
	#yrs facility discharged within 2,4,5-T Timeline	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index) kg per mg (Merck Index)	
3.000001	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
6		
2 705	calc mg/L COC discharged L per gallon (Merck Index)	
3.785 0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for Direct Discharge:		
	kg Copper	
538	kg Lead	
1.6	kg Mercury	
11,878 7,919	kg HPAHs kg LPAHs	
7,919	kg PCBs	
	kg DDx	
	kg Dieldrin	
-	kg Dioxins/Furans	

Alliance Chemical formatted for report 2 ARR2045 Direct_SW_PlumCreek

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)
Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Protocol Calculation

Alliance Chemical Inc.

33 Avenue	P		Newark	NJ	07105				
Facility BS	CUF	CUF_Categor	ry		C	UF_NOTES	COF	COF_NOTES	Facillty Adjusted BS
7.304E-5	10.0%	Periodic Noncomp	to sa 17 lik or (P, 19 fir sa ide the	1992 (PAS-00049898 mples collected in No. 7, 1993, due to continue ely to continue to existe operations of the AP-00216733-36)	B, PAP-00065863, PAP-000658656	acid, corrosive waste, greasy material, pH) from 1973 P-0006643, etc.), including exceedances of lead in 00066412). PVSC filed a Complaint dated December nit No.20401080 (for zinc and cyanide). Since it was ditations and adversely affect public health or safety demanded revoking the sewerage connection permit of the building, which was destroyed in a January hable to quantify releases from explosion and Plandfill site to the south to store their drums; FDR give Summary noted that a 1974 aerial photograph portion of the Avenue P Landfill from Alliance, and ses was significantly reduced. Most of the drums were andfill (PAS-00129646-47)."	0.0%	0% Cooperation with conduct of allocation and requests for related information	8.034E-5
								AP_ABS	8.034E-5

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Allocation Calculation

Alliance Chemical Inc.

33 Avenue	P		Newark	NJ	07105					
Facility BS	CUF	CUF_Catego	ry		С	UF_NOTES	COF	COF_NOTES	5	Facillty Adjusted BS
1.593E-2	10.0%	Periodic Noncom	tc sa 17 lik oi (P 19 fir sa id	o 1992 (PAS-00049898) amples collected in No. 7, 1993, due to continue to exist the operations of the PAP-00216733-36)	s, PAP-00065863, PAP-00065865, PAP-00065865, PAP-00065865, PAP-000658656	acid, corrosive waste, greasy material, pH) from 1973 P-0006643, etc.), including exceedances of lead in 20066412). PVSC filed a Complaint dated December mit No.20401080 (for zinc and cyanide). Since it was nitations and adversely affect public health or safety demanded revoking the sewerage connection permit om the building, which was destroyed in a January nable to quantify releases from explosion and P landfill site to the south to store their drums; FDR tive Summary noted that a 1974 aerial photograph portion of the Avenue P Landfill from Alliance, and ses was significantly reduced. Most of the drums were landfill (PAS-00129646-47)."	0.0%	0% Cooperation with conduct of allo for related information	ocation and requests	1.752E-2
									AP_ABS	1.752E-2

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Allocation Facility Cmass Calculation

Arkema Inc. 25 & 67 Main Street Belleville NJ 07109

Constituent Of Concern (COC)	Overland, Fate &	Dmass Overland,	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge	Dmass Direct Discharge	COC Total Pathway	COC A%	COC Historic CMass
	Transport C%	Fate & Transport					C%		Cmass		
Copper	100.00%	32.97	100.00%	456.98	0.00%	6,854.77	100.00%	-	489.95	1.018817E-2	4.99
Lead	100.00%	34.71	100.00%	140.01	0.00%	2,100.11	100.00%	-	174.72	1.018817E-2	1.78
Mercury	100.00%	0.68	100.00%	1.83	0.00%	27.40	100.00%	-	2.51	1.018817E-2	0.03
HPAHs	100.00%	1.54	100.00%	77.60	0.00%	1,164.06	100.00%	-	79.14	1.018817E-2	0.81
LPAHs	100.00%	-	100.00%	51.74	0.00%	776.04	100.00%	-	51.74	1.018817E-2	0.53
PCBs	100.00%	0.21	100.00%	-	0.00%	-	100.00%	-	0.21	1.018817E-2	0
DDx	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Protocol Calculation

Arkema Inc. 25 & 67 Main Street 07109 Belleville NJ

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	4.99	2.377E-6	1.640E-6
Lead	0.01	3,200,000.00	1.78	5.563E-7	5.563E-9
Mercury	0.95	42,000.00	0.03	6.081E-7	5.777E-7
HPAHs	0.05	240,000.00	0.81	3.360E-6	1.680E-7
LPAHs	0.01	170,000.00	0.53	3.101E-6	3.101E-8
PCBs	12.87	26,000.00	0	8.229E-8	1.059E-6
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Alternative Calulcation

Arkema Inc.				25 & 67 Main Street	Belleville	NJ	07109	

Constituent Of Concern (COC)	Relative Risk Number	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
	(RRN)								
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	1.769E-3	4.99	3,710.	1.769E-3	1.221E-3
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	6.054E-4	1.78	1,935.64	6.054E-4	6.054E-6
Mercury	0.95	42,000.00	4,322.53	41,955.96	5.799E-4	0.03	24.33	5.799E-4	5.509E-4
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	1.821E-5	0.81	3.56	1.821E-5	9.105E-7
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	1.717E-5	0.53	2.39	1.717E-5	1.717E-7
PCBs	12.87	26,000.00	20,066.54	25,795.56	1.047E-5	0	0.27	1.047E-5	1.347E-4
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Facility Bypass Information

Arkema Inc. 25 & 67 Main Street Belleville NJ 07109

Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Newark Bay	Bypass	0.00%	0.00%	Did not discharge waste into the Passaic river

Discharge Calcs	POTW Discharge Information gal/day discharged	COMMENTS/NOTES
	# hours/per day discharged	
	#days/week discharged (FDR) (PAP-000351693) #day/year (FDR) (PAP-00351581)	
49,734,575	calc gal/yr discharged; (FDR) (PAP-00351618, PAP-00351695-701, PAP-	115,000 gal/day: PAP-000352197-219
	00351683-92, PAP-351582-595)	
1921	Yr Ops started (FDR)	
1989	Yr Ops ceased (APQ)	
68	calc #yrs facility operated	1989 consistent with having 1988 process information
Copper (Cu)	Muse facility appropried	
	#yrs facility operated calc mg/L COC discharged; (FDR) (PAP-00351618, PAP-00351695-701,	
3.785	PAP-00351683-92, PAP00352197-219) L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
Lead (Pb)	calc kg COC discharged	
	#yrs facility operated calc mg/L COC discharged; (FDR) (PAP-00351618, PAP-00351695-701,	
	PAP-00351683-92, PAP00352197-219)	
	L per gallon (Merck Index) kg per mg (Merck Index)	
2,240	calc kg COC discharged	
Mercury (Hg) 68	#yrs facility operated	
0.0023	calc mg/L COC discharged; (FDR) (PAP-00351618, PAP-00351695-701, PAP-00351683-92, PAP00352197-219)	
	L per gallon (Merck Index)	
	kg per mg (Merck Index) calc kg COC discharged	
HPAHs		
	#yrs facility operated calc mg/L COC discharged; (FDR) (PAP-00351618, PAP-00351695-701,	
10%	PAP-00351683-92, PAP00352197-219)	
60%	% PAHs in O&G considered as HPAHs	
0.10	calc mg/L COC	deed notice for PAHs approved by NJDEP (APQ); O&G detected cut 50% to account for other potential non-PAH organic carbons in effluent.
	L per gallon (Merck Index)	
	kg per mg (Merck Index) calc kg COC discharged	
LPAHs		
	#yrs facility operated calc mg/L HPAHs in reported O&G discharge analysis provided with 1977	
100/	PVSC application (PAP00351695, 700-701)	
40%	% O&G that is considered PAHs % PAHs in O&G considered as LPAHs	
0.06	calc mg/L COC	
	L per gallon (Merck Index)	
	kg per mg (Merck Index) calc kg COC discharged	
PCBs		
//0	I #VIS TACILITY OPERATED WITHIN PCBs Timeline	
	#yrs facility operated within PCBs Timeline calc mg/L COC discharged	
3.785		
3.785 0.000001	calc mg/L COC discharged L per gallon (Merck Index)	
3.785 0.000001 - DDx	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility operated within DDx Timeline	
3.785 0.000001 - DDx	calc mg/L COC discharged L per gallon (Merck Index) leg per mg (Merck Index) calc kg COC discharged	(no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of use/presence (APQI)
3.785 0.000001 DDx 33	calc mg/L COC discharged L ber gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #Wrs facility operated within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index)	
3.785 0.000001 DDx 33	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility operated within DDx Timeline calc mg/L COC discharged	
3.785 0.000001 . DDx 33 3.785 0.000001 . Dieldrin	calc mg/L COC discharged L per gallon (Merck Index) leg per mg (Merck Index) calc leg COC discharged ##ys facility operated within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc leg COC discharged	
3.785 0.000001 . DDx 33 3.785 0.000001 . Dieldrin	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##yrs facility operated within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index)	use/presence (APQI)) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of
3.785 0.000001	calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##vs facility operated within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##vs facility operated within Dieldrin Timeline calc mg/L COC discharged	use/presence (APQI)
3.785 0.000001 DDx 33 3.785 0.000001 - Dieldrin 38	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##yrs facility operated within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##yrs facility operated within Dieldrin Timeline calc mg/L COC discharged ##yrs facility operated within Dieldrin Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index)	use/presence (APQI)) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of
3.785 0.000001	calc mg/L COC discharged L per gallon (Merck Index) lsg per mg (Merck Index) calc kg COC discharged ##ys facility operated within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##ys facility operated within Dieldrin Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged	use/presence (APQI)) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of
3.785 0.000001	calc mg/L COC discharged L Der gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #wrs facility operated within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #wrs facility operated within Disdrin Timeline calc mg/L COC discharged #wrs facility operated within Disdrin Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) #wrs facility operated	use/presence (APQI) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of use/presence (APQI)
3.785 0.00001	calc mg/L COC discharged L Der gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #wrs facility operated within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged #wrs facility operated within Dieldrin Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged	use/presence (APQI)) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of
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3.785 0.000001 DDX 33 3.785 0.000001 Dieldrin 38 3.785 0.000001 Diexins/Furans 68 3.785 0.000001	calc mg/L COC discharged L Der gallon (Merck Index) lag per mg (Merck Index) calc kg COC discharged ##yrs facility operated within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##yrs facility operated within Dieldrin Timeline calc kg COC discharged ##yrs facility operated within Dieldrin Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##yrs facility operated calc mg/L COC discharged ##yrs facility operated calc kg COC discharged ##yrs facility operated calc mg/L COC discharged L per gallon (Merck Index)	use/presence (APQI) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of use/presence (APQI) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of
3.785 0.000001 DDX 33 33 3.785 0.000001 - Dieldrin 38 3.785 0.000001 - Dioxins/Furans 68 3.785 0.000001 - Dioxins/Furans	calc mg/L COC discharged L Der gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##yrs facility operated within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##yrs facility operated within Dieldrin Timeline calc kg COC discharged ##yrs facility operated within Dieldrin Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) L per gallon (Merck Index) kg per mg (Merc	use/presence (APQI) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of use/presence (APQI) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of use/presence (APQI)
3.785 0.000001 DDX 33 33 3.785 0.000001 - Dieldrin 38 3.785 0.000001 - Dioxins/Furans 68 3.785 0.000001 - Dioxins/Furans	calc mg/L COC discharged L per gallon (Merck Index) lg per mg (Merck Index) lg per mg (Merck Index) calc kg COC discharged ##ys facility operated within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##ys facility operated within Dieldrin Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##ys facility operated calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged	use/presence (APQI) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of use/presence (APQI) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of use/presence (APQI) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of use/presence (APQI)
3.785 0.000001 DDX 33 33 3.785 0.000001	calc mg/L COC discharged L Der gallon (Merck Index) lag per mg (Merck Index) lag per mg (Merck Index) calc kg COC discharged ##vrs facility operated within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) lag per mg (Merck Index) calc kg COC discharged ##vrs facility operated within Dieldrin Timeline calc inc mg/L COC discharged L per gallon (Merck Index) calc kg COC discharged L per gallon (Merck Index) die kg per mg (Merck Index) die kg per mg (Merck Index) kg per mg (Merck Index) die kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) L per gallon (Merck Index)	use/presence (APQI) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of use/presence (APQI) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of use/presence (APQI)
3.785 0.000001 DDX 33 33 3.785 0.000001	calc mg/L COC discharged L Der gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##yrs facility operated within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##yrs facility operated within Dieldrin Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) l per gallon (Merck Index) kg per mg (Merck Index) ##yrs facility operated calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##yrs facility operated calc mg/L COC discharged ##yrs facility operated calc mg/L COC discharged ##yrs facility operated within 2,4-D Timeline calc mg/L COC discharged	use/presence (APQI) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of use/presence (APQI) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of use/presence (APQI) (no data in 1975 analysis provided with 1977 PVSC application (PAP 00351695, 700-701); no indication of use/presence (APQI)
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Arkema inc formatted for report 1 ARR2052 POTW_PVSC

COMMENTS/NOTES

reported to have had

Data from Rutgers University

Only the 25 Main Street site is

manufacturing (FDR, pages 3-6).

Direct Discharge Information ASSUMPTIONS, REFERENCES Discharge Calcs 4.08 FEET/YEAR AVERAGE PRECIPITATION Long term average annual precipitation includes floods and hurricane events occurring over time. 7.67 ACRES - TOTAL SITE AREA (acres) FDR page 1 Rough estimate of site area with exposed fill determined from review of historical 2.25 ACRES - AFFECTED AREA aerial photographs 1995-2020 and Figure on PAP-00466498. 4,046.86 METERS²/ACRE 9,105 METERS² (AFFECTED AREA) 0.0001 METERS/YEAR (ERODED SOIL THICKNESS) For this estimate, used a surface soil erosion rate of 0.1 mm/year, or 0.004 inches/year. 1 METERS³/YEAR (ERODED SOIL VOLUME) VOLUME/YEAR DISCHARGED TO PASSAIC RIVER 1921 Year site operations began Wallace & Tiernan (division of Arkema) developed the site and began operations (FDR, page 2) 1989 Year site processing and storage operations ceased Arkema sold all three parcels in 1989 (FDR, page 2) 68 NUMBER YEARS DISCHARGE Arkema liability 68 years, 1921 to 1989 (FDR, page 1) 62 METERS³ (TOTAL SOIL VOLUME DISCHARGED OVER TIME) 1,763 KG/M³ SOIL DENSITY Fill reported as fine to medium sand with trace silt and gravel (FDR, page 11). Bulk density range 1346 KG/M³ to 2179 KG/M³, so use average. (http://structx.com/Soil_Properties_002.html) 109,160 KILOGRAMS (TOTAL SOIL DISCHARGED OVER TIME) Copper (Cu) 68 YEARS DISCHARGED 302 MG/KG (MAX CONCENTRATION) Copper was found in on-site soil sample S-7 (0.-0.5 ft bgs) (FDR, page 10; PAP-00352577). 0.000001 kg per mg (Merck Index) 32.97 KILOGRAMS DISCHARGED Lead (Pb) 68 YEARS DISCHARGED 318 MG/KG (MAX CONCENTRATION) Lead concentration based on S-7 result (PAP-00726534) 0.000001 kg per mg (Merck Index) 34.71 KILOGRAMS DISCHARGED Mercury (Hg) 68 YEARS DISCHARGED 6.2 MG/KG (MAX CONCENTRATION) Mercury was found in on-site soil sample S-7 (0.0-0.5 ft bgs) (FDR, page 10, PAP-00352577).

0.000001 kg per mg (Merck Index)
0.68 KILOGRAMS DISCHARGED

PAHs (listed in Benzo(a)pyrene Equivalent conversion table)

68 YEARS DISCHARGED

14.1 MG/KG (TOTAL PAH AVERAGE CONCENTRATION)

0.000001 kg per mg (Merck Index)

1.54 KILOGRAMS DISCHARGED

PAHs (others detected)
68 YEARS DISCHARGED

0 MG/KG (TOTAL PAH MAX CONCENTRATION)

0.000001 kg per mg (Merck Index)
0.00 KILOGRAMS DISCHARGED
PCBs

59 YEARS DISCHARGED

1.89 MG/KG (MAX CONCENTRATION)

MG/KG (MAX CONCENTRATION)

NONE FOUND IN AVAILABLE DOCUMENTATION

0.000001 kg per mg (Merck Index)

0.21 KILOGRAMS DISCHARGED

DDx

0 YEARS DISCHARGED within DDx Timeline

MG/KG (MAX CONCENTRATION)

3.785 L per gallon (Merck Index)

0.000001 kg per mg (Merck Index)
0.00 KILOGRAMS DISCHARGED

Dieldrin
0 YEARS DISCHARGED within Dieldrin Timeline

3.785 L per gallon (Merck Index)
0.000001 kg per mg (Merck Index)
0.00 KILOGRAMS DISCHARGED

0 YEARS DISCHARGED
0 MG/KG (MAX CONCENTRATION)
0.000001 kg per mg (Merck Index)

0.00 calc kg COC discharged

SUMMARY CMASS ESTIMATES:

Dioxins/Furans

32.97 kg Copper 34.71 kg Lead 0.68 kg Mercury

1.54 kg PAHs (Benzo(a)pyrene Equivalent) 0.00 kg PAHs (Other)

0.21 kg PCBs
0.00 kg DDx
0.00 kg Dieldrin
0.00 kg Dioxins/Furans

70.10 MASS (KG) DISCHARGED FROM SURFACE SOIL

Total concentration of PAH compounds for Benzo(a)pyrene Equivalent https://floridadep.gov/waste/petroleum-restoration/documents/benzo-pyrene-equivalents-conversion-table-one-sample.

Maximum post-excavation concentration (Background, FDR Table, page 8).

Sum of Benzo(a)pyrene Equivalent conversion concentrations

Number of years reflect a 1930 start date for PCBs.

9-		Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
	PAHs used in this were actual	Benzo(a)pyrene	11.000	1.0	11.0000
	concentrations from soil sample	Benzo(a)anthracene	9.800	0.1	0.9800
	S-7 (North Yard Area soil sample	Benzo(b)fluoranthene	14.000	0.1	1.4000
	- see PAP-00726495-530).	Benzo(k)fluoranthene	4.000	0.01	0.0400
		Chrysene	12.000	0.001	0.0120
		Dibenz(a,h)anthracene	0.000	1.0	0.0000
		Indeno(1,2,3-cd)pyrene	6.600	0.1	0.6600
		DE Residential = 0.1 mg/kg· DE li	ndustrial = 0.7 mg/kg	7	_

DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg

Total Benzo(a)pyrene Equivalents =

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)
Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Protocol Calculation

Arkema Inc.

25 & 67 Ma	ain Stree	t	Belleville	NJ	07109				
Facility BS	CUF	CUF_Catego	ry	CUF_NOTES		COF	COF_NOTES	Facillty Adjusted BS	
3.481E-6	10.0%	Periodic Noncom	00 lea Ex dis the the op Ac wa blo	ass1653). The December asking indoor machine haust ventilators for scharging to the stair warehouse loading a building discharged peration, it also appeared to the ECRA as later removed (PADWdown to the outsing ve discharged blowdeport and Phase II Sai	ther 1989 Report of lery. There was a hear the plating room for the soil below (PAS-Carabay, one sample cold blowdown to the orared to have dischard Sampling Report and S-00102639-40). A code. When the boiler own to the exterior	wastewater discharge samples (PAP-00351641; PAP-nspection noted outdoor soil staining due to oil from vily stained drum storage area in the North Yard. Building 3 had condensate drains that were (0102607). There was a former spill in the location of lected - had high PAHs. A compressor on the inside of utside. When the boiler for this building was in ged blowdown to the exterior (PAS-00102606-07). If Phase II Sampling Plan, the associated stained soil ompressor on the inside of the building discharged for this building was in operation, it also appeared to (PAS-00102606-07). According to the ECRA Sampling ciated stained soil was later removed (PAS-00102639-	-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities	3.133E-6
								AP_ABS	3.133E-6

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Allocation Calculation

Arkema Inc.

25 & 67 Ma	ain Stree	t	Belleville	NJ	07109					
Facility BS	CUF	CUF_Catego	ry	CUF_NOTES		CUF_NOTES		COF	COF_NOTES	Facility Adjusted BS
1.913E-3	10.0%	Periodic Noncom	00 lea Exl dis the the op Ac wa blo ha	351653). The Decembring indoor machine maust ventilators for charging to the stair example warehouse loading to building discharged eration, it also appead cording to the ECRA as later removed (PA) by who was to the outsing to the sustain the outsing to the sustain the outsing to the sustain the outsing the sustain the outsing the sustain t	ber 1989 Report of I ery. There was a hea the plating room for led soil below (PAS-0 bay, one sample col blowdown to the out ared to have discharg Sampling Report and S-00102639-40). A cole. When the boiler to own to the exterior (wastewater discharge samples (PAP-00351641; PAP-nspection noted outdoor soil staining due to oil from vily stained drum storage area in the North Yard. Building 3 had condensate drains that were 0102607). There was a former spill in the location of lected - had high PAHs. A compressor on the inside of utside. When the boiler for this building was in ged blowdown to the exterior (PAS-00102606-07). I Phase II Sampling Plan, the associated stained soil ompressor on the inside of the building discharged for this building was in operation, it also appeared to [PAS-00102606-07). According to the ECRA Sampling ciated stained soil was later removed (PAS-00102639-	-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities	1.722E-3	
							<u>-</u>	AP_ABS	1.722E-3	

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Allocation Facility Cmass Calculation

221 Foundry Street **Ashland Inc.** NJ 07105 Newark

Constituent Of Concern (COC)	Overland, Fate & Transport	Dmass Overland, Fate &	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
	C%	Transport									
Copper	100.00%	-	100.00%	-	0.00%	-	10.00%	-	0	1.018817E-2	0
Lead	100.00%	-	100.00%	-	0.00%	-	10.00%	-	0	1.018817E-2	0
Mercury	100.00%	-	100.00%	-	0.00%	-	10.00%	-	0	1.018817E-2	0
HPAHs	100.00%	60.94	100.00%	-	0.00%	12.34	10.00%	11.0	62.04	1.018817E-2	0.63
LPAHs	100.00%	603.62	100.00%	-	0.00%	8.23	10.00%	7.4	604.36	1.018817E-2	6.16
PCBs	100.00%	-	100.00%	-	0.00%	-	10.00%	-	0	1.018817E-2	0
DDx	100.00%	-	100.00%	-	0.00%	-	10.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.00%	-	10.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	10.00%	-	0	1.018817E-2	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Protocol Calculation

221 Foundry Street **Ashland Inc.** 07105 Newark NJ

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	0	0	0
Lead	0.01	3,200,000.00	0	0	0
Mercury	0.95	42,000.00	0	0	0
HPAHs	0.05	240,000.00	0.63	2.634E-6	1.317E-7
LPAHs	0.01	170,000.00	6.16	3.622E-5	3.622E-7
PCBs	12.87	26,000.00	0	0	0
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Alternative Calulcation

221 Foundry Street Ashland Inc. 07105 Newark NJ

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	0	0	0	0	0
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	0	0	0	0	0
Mercury	0.95	42,000.00	4,322.53	41,955.96	0	0	0	0	0
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	1.427E-5	0.63	2.79	1.427E-5	7.137E-7
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	2.006E-4	6.16	27.94	2.006E-4	2.006E-6
PCBs	12.87	26,000.00	20,066.54	25,795.56	0	0	0	0	0
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Facility Bypass Information

Ashland Inc. 221 Foundry Street Newark NJ 07105

Item	Bypass Name	Bypass Name Bypass Type Time % Flow %		Flow %	Bypass Notes
1	Newark Bay	Bypass	0.00%	0.00%	Did not discharge waste into the Passaic river

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
2,150		ADDA NICCO
5	# hours/per day discharged #days/week discharged	1984 PVSC Permit Application 1995 Ashland Letter regarding PVSC Permit #20402793
52		2555 Ashiand Letter regarding 1 v5e1 ennic#20402755
559,000	calc gal/yr discharge	Discharged all wastewater to industrial sewer since ownership (1968), overflow from Roanoke St
		CSO storm sewer discharges to Passaic River during high precipitation. Events.
1968	Yr Ops started Yr Ops ceased	
24		
Copper (Cu)		
24	#yrs facility discharged	100C complian ND
3.785	calc mg/L COC discharged L per gallon (Merck Index)	1986 sampling ND
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Lead (Pb) 24	#yrs facility discharged	
-	calc mg/L COC discharged	1986 sampling ND
3.785	L per gallon (Merck Index)	. *
0.000001	kg per mg (Merck Index)	
Moreury (He)	calc kg COC discharged	
Mercury (Hg)	#yrs facility discharged	
-	calc mg/L COC discharged	1986 sampling ND
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
- HPAHs	calc kg COC discharged	
24	#yrs facility discharged	Permit Application Files (PAP-00089937)
162	calc mg/L TOC	320 mg/l TOC outlet 20403791
2.5%		4 mg/l TOC outlet 20403792
10%	% O&G that is considered PAHs % PAHs considered as HPAHs	
0.2		
3.785	L per gallon (Merck Index)	
0.000001		
LPAHs 12.34	calc kg COC discharged	
	#yrs facility discharged	Permit Application Files (PAP-00089937)
162		320 mg/l TOC outlet 20403791
	% TOC that is considered O&G	4 mg/l TOC outlet 20403792
10% 40%		
	calc mg/L LPAHs	
3.785		
0.000001		
	calc kg COC discharged	
PCBs 10	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.000001		
DDx	calc kg COC discharged	
5	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785		
0.000001	kg per mg (Merck Index) calc kg COC discharged	
Dieldrin	care ng coo asenargea	
	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785 0.000001	L per gallon (Merck Index) kg per mg (Merck Index)	
0.000001	calc kg COC discharged	
Dioxins/Furans		
	#yrs facility discharged	
3.785	calc mg/L COC discharged	
	L per gallon (Merck Index) kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
25	#yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged	
3.785		
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T	thurs facility discharged within 2.4.5. T Timeline	
18	#yrs facility discharged within 2,4,5-T Timeline calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
Diania/Fusas Day	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP	#yrs facility discharged within 2,4,6-TCP Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
1		
Summary DMassCOC for POTW:		
-	kg Copper	
	kg Lead	
12.3	kg Mercury kg HPAHs	
8.2		
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin kg Dioxins/Furans	
-		

Ashland Inc DMass formatted for report 1 ARR2061 POTW_PVSC

Discharge Calcs	Direct Discharge Information	COMMENTS/NOTES
	# hours/day discharged	1990 NJDEP Letter states NJPDES Permit #NJ0076641 for surface water discharge
1	# days/week discharged	No other informationestimated based on discharge to PVSC
1		
	# weeks/yr discharged	
500,000	# gals/yr directly discharged	
4.00	6.00	
4.08	ft; 30yr average annual precipitation per Rutgers information	
43 560	acres ft2 per acre	
43,300	itz per acre	
1968	Yr Ops started	
	Yr Ops ceased	
	calc #yrs facility operated	
Copper (Cu)		
	#yrs facility discharged	1986 Sampling ND
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
Lead (Pb)	calc kg COC discharged	
	#yrs facility discharged	1986 Sampling ND
24	calc mg/L COC discharged	1300 Sattipling NO
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
	calc kg COC discharged	
Mercury (Hg)		
24	#yrs facility discharged	1986 Sampling ND
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
<u> </u>	calc kg COC discharged	
HPAHs		
	#yrs facility discharged	Permit Application Files (PAP-00089937)
	calc mg/L TOC	320 mg/l TOC outlet 20403791
	% TOC that is considered O&G	4 mg/l TOC outlet 20403792
	% O&G that is considered PAHs	
	% PAHs considered as HPAHs calc mg/L HPAHs	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
LPAHs		
	#yrs facility discharged	Permit Application Files (PAP-00089937)
	calc mg/L TOC	320 mg/l TOC outlet 20403791
	% TOC that is considered O&G	4 mg/l TOC outlet 20403792
10%	% O&G that is considered PAHs	
40%	% PAHs considered as PAHs	
	calc mg/L HPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
	calc kg COC discharged	
PCBs	W. A. W. B. L. J. M. L. T.	
	#yrs facility discharged within PCBs Timeline	
10	calc mg/L COC discharged	
3.785	calc mg/L COC discharged L per gallon (Merck Index)	
3.785	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index)	
3.785 0.000001	calc mg/L COC discharged L per gallon (Merck Index)	
3.785 0.000001 DDx	calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged	
3.785 0.000001 DDx	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline	
10 3.785 0.000001 . DDx 5 3.785	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index)	
10 3.785 0.000001 - DDx 5 3.785	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index)	
DDX 5 3.785 0.000001	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index)	
10 3.785 0.000001 - DDX 5 3.785 0.000001 - Dieldrin	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged	
10 3.785 0.000001 - DDX 5 3.785 0.000001 - Dieldrin	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged #yrs facility discharged #yrs facility discharged within Dieldrin Timeline	
DDX 3.785 0.000001 DDX 5 3.785 0.000001	calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged discharged discharged within Discharged lipt facility discharged within Discharged calc mg/L COC discharged	
10 3.785 0.000001 DDx 5 3.785 0.000001 0.000001 0.000001 Dieldrin 20 3.785	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged L per gallon (Merck Index) L per gallon (Merck Index) L per gallon (Merck Index)	
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DDX 5 3.785 0.000001 DDX 5 3.785 0.000001 Dieldrin 20 3.785 0.000001	calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged L per gallon (Merck Index) L per gallon (Merck Index)	
10 3.785 0.000001 DDX 5 3.785 0.000001 Dieldrin 20 3.785 0.000001 Dioxins/Furans	calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged within Discharged Lper gallon (Merck Index) deale kg COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged	
10 3.785 0.000001 Dieldrin 20 3.785 0.000001 Dieldrin 20 3.785 0.000001	calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##vrs facility discharged within DDx Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##vrs facility discharged within Dieldrin Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged ##vrs facility discharged within Dieldrin Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck	
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10 3.785 0.000001 DDX 5 3.785 0.000001 Dieldrin 20 3.785 0.000001 Dioxins/Furans 24 3.785 0.000001 Dioxin/Furan Precursor - 2,4-D 25 3.785 0.000001 Dioxin/Furan Precursor - 2,4,5-T 18 3.785 0.000001 Dioxin/Furan Precursor - 2,4,5-T 28 3.785 0.000001 Dioxin/Furan Precursor - 2,4,5-T Summary DMassCOC for Direct Discharge:	calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged Lper gallon (Merck Index) calc kg COC discharged Lper gallon (Merck Index) calc kg COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged kg Copper kg Lead kg Merccury kg HPAHs kg LPAHs	
10 3.785 0.000001 DDX 5 3.785 0.000001 Dieldrin 20 3.785 0.000001 Dioxins/Furans 24 3.785 0.000001 Dioxin/Furan Precursor - 2,4-D 25 3.785 0.000001 Dioxin/Furan Precursor - 2,4,5-T 18 3.785 0.000001 Dioxin/Furan Precursor - 2,4,5-T 28 3.785 0.000001 Dioxin/Furan Precursor - 2,4,5-T Summary DMassCOC for Direct Discharge:	calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged within DDx Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged Lper gallon (Merck Index) kg per mg (Merck Index)	
10 3.785 0.000001 DDX 5 3.785 0.000001 Dieldrin 20 3.785 0.000001 Dioxins/Furans 24 3.785 0.000001 Dioxin/Furan Precursor - 2,4-D 25 3.785 0.000001 Dioxin/Furan Precursor - 2,4,5-T 18 3.785 0.000001 Dioxin/Furan Precursor - 2,4,5-T 28 3.785 0.000001 Dioxin/Furan Precursor - 2,4,5-T Summary DMassCOC for Direct Discharge:	calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged calc mg/L COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged Lper gallon (Merck Index) calc kg COC discharged Lper gallon (Merck Index) calc kg COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged kg Copper kg Lead kg Merccury kg HPAHs kg LPAHs	
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Ashland Inc DMass formatted for report 2 ${\sf ARR2062}$ Direct_SW_Passai

Discharge Calcs	Direct Discharge Information # hours/day discharged # days/week discharged # weeks/yr discharged	ASSUMPTIONS, REFERENCES	COMMENTS/NOTES
	4.08 FEET/YEAR AVERAGE PRECIPITATION	Long term average annual precipitation includes floods and hurricane events occurring over time.	Data from Rutgers University
	11 ACRES - TOTAL SITE AREA (acres)	FDR, p 1	
	7 ACRES - AFFECTED AREA	Rough estimate of site area with exposed soil determined from review of historical aerial photographs 1995-2020 (Google Earth Pro) and Figure 1 Allocation Facilities map.	
	4,046.86 METERS ² /ACRE		
	26,305 METERS ² (AFFECTED AREA)		
	0.0001 METERS/YEAR (ERODED SOIL THICKNESS)	For this estimate, used a surface soil erosion rate of 0.1 mm/year, or 0.004 inches/year.	
	3 METERS ³ /YEAR (ERODED SOIL VOLUME)		
	1968 Year site operations began	1968 - Ashland Oil, Inc. acquired the property from Lasp Realty, Inc., in June 1966 (PAP-00089138; PAS-00050517; FDR, p 1)	8
	2003 Year site was purchased from Ashland	1992 - All facility buildings, process lines, and storage tanks, as well as on-site railroad sidings, were dismantled and removed from the site in 1992 (PAP-00090523; FDR, p 1)	2003 - Foundry Street Development LLC acquired the property in 2003 (PAS-00000057; FDR, p 1)
	35 NUMBER YEARS DISCHARGE	1999 - approx 750 tons of soil containing tar/asphalt were excavated from AOC-2 sq ft (0.106 acres) (PAP-00089764). This remediation is not accounted for in the	
	92 METERS ³ (TOTAL SOIL VOLUME DISCHARGED OVER TIME)		
	1,963 kg/m³ soil density	Surface soils during drilling were loose/non-cohesive silt, fine to coarse sand, clay, gravel, wood, cobbles, cement and brick fragments, and cinders (PAP-00089967) Bulk density of silty sand and gravel and clay range 1442 KG/M3 to 2483 KG/M3, so use average. (http://structx.com/Soil_Properties_002.html)	
	180,680 KILOGRAMS (TOTAL SOIL DISCHARGED OVER TIME)		
Copper (Cu)	35 YEARS DISCHARGED 0 MG/KG (MAX CONCENTRATION)	Site is not located on historic fill (FDR pg 5) Copper Cyanide handled at facility (FDR pg 2). Concentration 0 mg/kg because the only available soil sample (MW-4P) was taken of the viscous asphalt-like product present in the upper fill material surrounding well MW-4 (PAP-00089980).	
	0.000001 kg per mg (Merck Index) 0 KILOGRAMS DISCHARGED		

Lead (Pb)

35 YEARS DISCHARGED

0 MG/KG (AVERAGE CONCENTRATION)

0.000001 kg per mg (Merck Index) 0 KILOGRAMS DISCHARGED Mercury (Hg)

35 YEARS DISCHARGED 0.0 MG/KG (MAX CONCENTRATION)

Concentration 0 mg/kg because the only available soil sample (MW-4P) was taken of the viscous asphalt-like product present in the upper fill material surrounding well MW-4 (PAP-00089980).

Concentration 0 mg/kg because the only available soil sample (MW-4P) was taken of the viscous asphalt-like product present in the upper fill material surrounding well MW-4 (PAP-00089980).

0.000001 kg per mg (Merck Index) 0 KILOGRAMS DISCHARGED PAHs (listed in Benzo(a)pyrene Equivalent conversion table) 35 YEARS DISCHARGED

308.3 MG/KG (TOTAL PAH MAX CONCENTRATION) 0.000001 kg per mg (Merck Index) 56 KILOGRAMS DISCHARGED PAHs (others detected)

35 YEARS DISCHARGED

113 MG/KG (TOTAL PAH MAX CONCENTRATION) 0.000001 kg per mg (Merck Index)

20 KILOGRAMS DISCHARGED 0 YEARS DISCHARGED MG/KG (MAX OF REPORTED CONCENTRATIONS) 0.000001 kg per mg (Merck Index) 0 KILOGRAMS DISCHARGED 0 YEARS DISCHARGED within DDx Timeline MG/KG (MAX CONCENTRATION) 3.785 L per gallon (Merck Index)

0.000001 kg per mg (Merck Index)

0 KILOGRAMS DISCHARGED Dieldrin

0 YEARS DISCHARGED within Dieldrin Timeline MG/KG (MAX CONCENTRATION) 3.785 L per gallon (Merck Index)

0.000001 kg per mg (Merck Index) 0 KILOGRAMS DISCHARGED

NONE FOUND IN AVAILABLE DOCUMENTATION Dioxins/Furans 0 YEARS DISCHARGED

> 0 MG/KG (MAX CONCENTRATION) 0.000001 kg per mg (Merck Index)

0 calc kg COC discharged

total concentration of PAH compounds for Benzo(a)pyrene Equivalent https://floridadep.gov/waste/petroleum-restoration/documents/benzo-pyrene-equivalents-conversion-table-one-sample.		Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
	Sample 40-1 (PAP-00123631, Figure 9)	Benzo(a)pyrene	200.000	1.0	200.0000
Sum of Benzo(a)pyrene Equivalent conversion concentrations using maximum					
concentrations.		Benzo(a)anthracene	240.000	0.1	24.0000
		Benzo(b)fluoranthene	360.000	0.1	36.0000
		Benzo(k)fluoranthene	0.000	0.01	0.0000
		Chrysene	250.000	0.001	0.2500
		Dibenz(a,h)anthracene	35.000	1.0	35.0000
		Indeno(1,2,3-cd)pyrene	130.000	0.1	13.0000
PAH values from sample SB-124 (0-0.5 ft bgs) (PAP-00089739, Table 13)		DE Residential = 0.1 mg/k	g; DE Industrial = ().7 mg/kg	
Acenaphthene	14	Tota	ıl Benzo(a)pyrene	e Equivalents =	308.3
Anthracene	22				
Fluorene	18				
Naphthalene	ND				
Fluoranthene	59				
SUM	113				

SUMMARY CMASS ESTIMATES:

0.00 kg Copper

0.00 kg Lead

0.00 kg Mercury

55.69 kg PAHs (Benzo(a)pyrene Equivalent) 20.42 kg PAHs (Other)

20.42 kg PAHs (Other 0.00 kg PCBs 0.00 kg DDx

0.00 kg Dieldrin 0.00 kg Dioxins/Furans

76.11 MASS (KG) DISCHARGED FROM SURFACE SOIL

Disabawa Calaa	Discret Bischouse Information	NOTES COMMENTS DEFENSES		
Discharge Calcs	Direct Discharge Information 4.08 FEET/YEAR AVERAGE PRECIPITATION per Rutgers Univ.	NOTES, COMMENTS, REFERENCES		
	4.00 FEET/ FEAR AVERAGET REGISTRATION PER Rutgers offiv.			
	7.5 ACRES - TOTAL SITE AREA (acres)		-	
	0.46 ACRES - AFFECTED AREA	Dike area was roughly 100 ft x 200 ft (PAP-00089932 p 2). 20000 sf = 0.4591 acre		
	4,046.86 METERS ² /ACRE		•	
	1,858 METERS ² (AFFECTED AREA)			
	0.0001 METERS/YEAR (ERODED SOIL THICKNESS)	For this estimate, used a surface soil erosion rate of 0.1 mm/year, or 0.004 inches/year.		
	0 METERS ³ /YEAR (ERODED SOIL VOLUME)			
	1979 YEAR OF DOCUMENTED FUEL OIL SPILL	#4 fuel oil spilled from AST on March 6, 1979 (PAP-00089932)		
	2003 Year site was purchased from Ashland	1992 - All facility buildings, process lines, and storage tanks, as well as on-site railroad sidings, were dismantled and removed from the site in 1992 (PAP-00090523; FDR, p 1)	Tank 215 adjacent to tank farm in west parcel. Entire tank farm was within dike 1994 - remediation of LNALP impaced soils and soils exceeding 10,000 mg/kg total organic contaminants (PAP-00089622). Description of remediation not available, will assume it was not a type to address COCs in this spreadsheet	2003 - Foundry Street Development LLC acquired the property in 2003 (PAS- 00000057; FDR, p 1)
	24 NUMBER YEARS DISCHARGE			
	⁴ METERS ³ (TOTAL SOIL VOLUME DISCHARGED OVER TIME)			
	1,963 kg/m³ soil density	Surface soils during drilling were loose/non-cohesive silt, fine to coarse sand, clay, gravel, wood, cobbles, cement and brick fragments, and cinders (PAP-0009964, 7) Bulk density of silty sand and gravel and clay range 1442 KG/M3 to 2483 KG/M3, so use average. (http://structx.com/Soil_Properties_002.html)		
	8,751 KILOGRAMS (TOTAL WT OF SOIL AFFECTED OVER TIME)			
Copper (Cu)	24 YEARS DISCHARGED 0 MG/KG (MAX CONCENTRATION)			
Lead (Pb)	0.000001 kg per mg (Merck Index) 0 KILOGRAMS DISCHARGED 24 YEARS DISCHARGED 0 MG/KG (MAX CONCENTRATION) 0.000001 kg per mg (Merck Index) 0 KILOGRAMS DISCHARGED			

Toxic

Equivalency

Factor

1.0

0.1

0.1

0.01

0.001

1.0

0.1

Benzo(a)pyrene

Equivalents

449.3500

55.1510

12.5740

0.3408

11.8870

68.5600

2.5150

600.4

Mercury (Hg)	
24	YEARS DISCHARGED
0.0	MG/KG (MAX CONCENTRATION)
0.000001	kg per mg (Merck Index)
0	KILOGRAMS DISCHARGED
PAHs (listed in Benzo(a)pyrene	
Equivalent conversion table)	
	YEARS DISCHARGED
600.38	MG/KG (TOTAL PAH AVERAGE CONCENTRATIO
0.000001	kg per mg (Merck Index)
5.25	KILOGRAMS DISCHARGED
PAHs (others detected)	
24	YEARS DISCHARGED
66640	MG/KG (TOTAL PAH MAX CONCENTRATION)
0.000001	kg per mg (Merck Index)
583.20	KILOGRAMS DISCHARGED
PCBs	
24	YEARS DISCHARGED within PCBs Timeline
0	MG/KG (MAX OF REPORTED CONCENTRATIONS
0.000001	kg per mg (Merck Index)
0	KILOGRAMS DISCHARGED
DDx	
24	YEARS DISCHARGED within DDx Timeline
	MG/KG (CONCENTRATION)
3.785	L per gallon (Merck Index)
0.000001	kg per mg (Merck Index)
0	KILOGRAMS DISCHARGED
Dieldrin	1
24	YEARS DISCHARGED within Dieldrin Timeline
	MG/KG (CONCENTRATION)

Total concentration of PAH compounds for Benzo(a)pyrene Equivalent PAHs number 5 fuel oil, values from "Characteristics of Spilled Oils, Fuels, and Petroleum Products" Wang https://floridadep.gov/waste/petroleum-restoration/documents/benzo-pyrene-Concentration Contaminant 2003, PAHs listed on p 132 (0.0% weathered values equivalents-conversion-table-one-sample. (mg/kg) used) Benzo(a)pyrene 449.350 Benzo(a)anthracene 551.510 125.740 Benzo(b)fluoranthene Benzo(k)fluoranthene 34.080 From Wang 2003 p 132 (data presented in ug/g) 11887.000 Chrysene 33.69 Dibenz(a,h)anthracene 68.560 Acenaphthylene Acenaphthene 167.5 Indeno(1,2,3-cd)pyrene 25.150 24130 DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg Phenanthrene 22779 Anthracene Total Benzo(a)pyrene Equivalents =

83.87

4986

14460 66640.06

NO CONCENTRATION INFO

Benzo(g,h,i)perylene

Fluorene

SUM

Naphthalene

NO CONCENTRATION INFO

NO CONCENTRATION INFO

MG/KG (CONCENTRATION) 3.785 L per gallon (Merck Index)

0 calc kg COC discharged

0.000001 kg per mg (Merck Index) 0 KILOGRAMS DISCHARGED Dioxins/Furans

24 YEARS DISCHARGED MG/KG (CONCENTRATION) 0.000001 kg per mg (Merck Index)

SUMMARY CMASS ESTIMATES:

0.00 kg Copper 0.00 kg Lead

0.00 kg Mercury

5.25 kg Benzo(a)pyrene Equivalent

583.20 kg PAHs MAX 0.00 kg PCBs

> 0.00 kg DDx 0.00 kg Dieldrin 0.00 kg Dioxins/Furans

588.45 MASS (KG) DISCHARGED BY OVERLAND FLOW

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)
Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Protocol Calculation

Ashland Inc.

221 Foundr	y Street		Newark	NJ	07105				
Facility BS	CUF	CUF_Catego	ry		C	UF_NOTES	COF	COF_NOTES	Facility Adjusted BS
4.939E-7	10.0%	Periodic Noncom	co 19 pr at (P. sp ta Ac	ntinuous monitoring of 171, to cease pollution oper pretreatment, af Avenue P. was "not o AP-00089153). Inspecial lage and/or leakage ink farms, loading/unloccording to NJDEP, cor	of facility outfalls (F n at once, and warn fter a sample of wa only highly polluting ctions conducted by throughout Ashland pading manifolds, p crective measures w	om PVSC on August 10, 1990, for failure to maintain AS-00050635). Ashland was notified on May 26, ed against discharge to the sanitary sewer without shings entering into the Roanoke Avenue Storm Sewer," but contained flammable and explosive materials y NJDEP personnel on March 13 and 28, 1979, noted d's facility. Areas noted included the following: all ipe connections, sumps, and the storm sewer system. Were discussed with Ashland's officials who stated that the company to implement all of the remedies required	-20.0%	g -20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities	4.445E-7

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Allocation Calculation

Ashland Inc.

Facility BS	CUF_Category Periodic Noncompliacr	con	•	ce of violation fro	m PVSC on August 10, 1990, for failure to maintain	COF	COF_NOTES -20% CPG/SPG member - Continuous provision of	Facility Adjusted BS
2.720E-6 10.0%	Periodic Noncompliacr	con	•		m PVSC on August 10, 1990, for failure to maintain	-20.0%	20% CBG/SBG member. Continuous provision of	2 4405 6
		proj at A (PAI spill tanl Acc it w	oper pretreatment, after Avenue P. was "not only AP-00089153). Inspecticillage and/or leakage thronk farms, loading/unloaccording to NJDEP, corrections.	t once, and warne r a sample of wasl y highly polluting,' ons conducted by roughout Ashland' ding manifolds, pi ctive measures we	AS-00050635). Ashland was notified on May 26, d against discharge to the sanitary sewer without hings entering into the Roanoke Avenue Storm Sewer but contained flammable and explosive materials NJDEP personnel on March 13 and 28, 1979, noted sa facility. Areas noted included the following: all pe connections, sumps, and the storm sewer system. ere discussed with Ashland's officials who stated that e company to implement all of the remedies required		funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities	2.448E-6

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Allocation Facility Cmass Calculation

Atlantic Richfield (ARCO)

86 Doremus Avenue

Newark

NJ

07105

Constituent Of Concern (COC)	Overland, Fate &	Dmass Overland,	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway	COC A%	COC Historic CMass
	Transport C%	Fate & Transport					C%		Cmass		
Copper	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Lead	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Mercury	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
HPAHs	100.00%	2.	100.00%	-	0.00%	343.38	100.00%	345.1	347.06	1.018817E-2	3.54
LPAHs	100.00%	9.16	100.00%	-	0.00%	228.92	100.00%	230.0	239.2	1.018817E-2	2.44
PCBs	100.00%	5.03	100.00%	-	0.00%	-	100.00%	-	5.03	1.018817E-2	0.05
DDx	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Protocol Calculation

86 Doremus Avenue

Atlantic Richfield (ARCO)

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	0	0	0
Lead	0.01	3,200,000.00	0	0	0
Mercury	0.95	42,000.00	0	0	0
HPAHs	0.05	240,000.00	3.54	1.473E-5	7.367E-7
LPAHs	0.01	170,000.00	2.44	1.434E-5	1.434E-7
PCBs	12.87	26,000.00	0.05	1.971E-6	2.537E-5
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

07105

Newark

NJ

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Alternative Calulcation

tlantic Richfield	86 Doremus	Avenue		Newark	NJ	07105					
Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score		
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	0	0	0	0	0		
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	0	0	0	0	0		
Mercury	0.95	42,000.00	4,322.53	41,955.96	0	0	0	0	0		
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	7.985E-5	3.54	15.63	7.985E-5	3.993E-6		
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	7.939E-5	2.44	11.06	7.939E-5	7.939E-7		
PCBs	12.87	26,000.00	20,066.54	25,795.56	2.507E-4	0.05	6.47	2.507E-4	3.226E-3		
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0		
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0		
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0		

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Facility Bypass Information

Atlantic Richfield (ARCO) 86 Doremus Avenue Newark NJ 07105

Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Newark Bay	Bypass	0.00%	0.00%	Did not discharge waste into the Passaic river

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
	gal discharged per day/week/month	West Yard Sanitary and Storm water discharge was to the PVSC. No evidence of any permit
	# hours/per day discharged	for these discharges. Assume connect to PVSC as same site as Chevron.
	#days/week discharged #weeks/yr discharged	Assume similar flow as for direct discharge to the Passaic River
9,600,000	calc gal/yr discharge	Assume similar now as for direct discharge to the Passaic River
	Yr Ops started	
	Yr Ops ceased	
21	calc #yrs facility operated	
Copper (Cu)		
	#yrs facility discharged	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
Lead (Pb)	calc kg COC discharged	
	#yrs facility discharged	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
Mercury (Hg)	calc kg COC discharged	
	#yrs facility discharged	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
HPAHs 21	#yrs facility discharged	Based on Chevron
	apyrs racility discharged calc mg/L O&G	pased on energy
	% O&G that is considered PAHs	
60%	% PAHs considered as HPAHs	
0.5	calc mg/L HPAHs	
3.785 0.000001	L per gallon (Merck Index) kg per mg (Merck Index)	
343	calc kg COC discharged	
LPAHs		
21	#yrs facility discharged	Based on Chevron
	calc mg/L O&G	
	% O&G that is considered PAHs	
	% PAHs considered as LPAHs calc mg/L LPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
	calc kg COC discharged	
PCBs		
22	#yrs facility discharged within PCBs Timeline	
3.785	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
12	#yrs facility discharged within DDx Timeline	
3.785	calc mg/L COC discharged L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
2	#yrs facility discharged within Dieldrin Timeline	
3.785	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
F	calc kg COC discharged	
Dioxins/Furans		
21	#yrs facility discharged calc mg/L COC discharged	
	reare mere coe discharged	
2 795		
3.785 0.000001	L per gallon (Merck Index) kg per mg (Merck Index)	
0.000001	L per gallon (Merck Index)	
0.000011 - Dioxin/Furan Precursor - 2,4-D	L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged	
0.000011 - Dioxin/Furan Precursor - 2,4-D	L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline	
0.000001 - Dioxin/Furan Precursor - 2,4-D	L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L OCC discharged	
0.000001 - Dioxin/Furan Precursor - 2,4-D 6 3.785	L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #tyrs facility discharged within 2,4-D Timeline calc mg/L COC discharged L per gallon (Merck Index)	
0.000001 - Dioxin/Furan Precursor - 2,4-D	L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L OCC discharged	
0.000001 - Dioxin/Furan Precursor - 2,4-D 6 3.785 0.000001 - Dioxin/Furan Precursor - 2,4,5-T	L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged	
0.000001 - Dioxin/Furan Precursor - 2,4-D 6 3.785 0.000001 - Dioxin/Furan Precursor - 2,4,5-T	L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #tyrs facility discharged within 2,4-D Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #tyrs facility discharged within 2,4,5-T Timeline	
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0.000001 - Dioxin/Furan Precursor - 2,4-D - 6 - 3.785 - 0.000001 - Dioxin/Furan Precursor - 2,4,5-T - 7 - 3.785 - 0.000001 - Dioxin/Furan Precursor - 2,4,6-TCP	L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L OCS discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4,5-T Timeline calc mg/L OCS discharged L per gallon (Merck Index) kg per mg (Merck Index) kg voc C discharged L per gallon (Merck Index) kg voc C discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L OCS discharged	
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0.000001 - Dioxin/Furan Precursor - 2,4-D - 3.785 - 0.000001 - 7 - 3.785 - 0.000001 - 7 - 3.785 - 0.000001 0.000001 - 0.0000001 - 0.00001 - 0.000001 - 0.000001 - 0.000001 - 0.000001 -	L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L OCd discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4,5-T Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg LpaHs kg LpaHs kg LPaHs kg PCBs	
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0.000001 - Dioxin/Furan Precursor - 2,4-D - 3.785 - 0.000001 - Dioxin/Furan Precursor - 2,4,5-T - 7 - 3.785 - 0.000001 Dioxin/Furan Precursor - 2,4,6-TCP - 2 - 3.785 - 0.000001	L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L OCd discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4,5-T Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg LpaHs kg LpaHs kg LPaHs kg PCBs	

Atlantic Richfield DMass formatted for report 1 ARR2074 POTW_PVSC

Section Security			
MacConst. Accordance	Discharge Calcs		
1.00 1.00			
	9,647,180		
1.00			
1.50 For printed 1.50 For pr			
Part			
1970 1970	,		
Coper (CO) A. Printing desirating Comment (CO) CONTRACTOR			
1	21	caic #yrs facility operated	
1	Copper (Cu)		
187 Are price intensives	21		
September Sept		calc mg/L COC discharged	
Mark			
Sept			
1.0	Lead (Pb)		
1.70 3 mg plan March Book 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000 1.00000	21		
	2.705		
Sect			
Memory 1004	-		
SECOND CONTROL SECOND CONTROL	Mercury (Hg)		
1.70 per patro Denne satelog	21		
0.00000 Spee may be level to be level	2.705		
### A TOTAL CONTROLLED 100 CONTROLLED			
March			
2.00 Contemp Contemp	HPAHs		
150 SOAR Content on Stroke Content of Stroke			
100 100			Based on Chevron
1.00 1.00			
1970 1970			
March Marc	3.785	L per gallon (Merck Index)	
1995 Per Settle discharged			
2		LAIL KY COC discharged	
1.20 Color page Color		#vrs facility discharged	
## APPS SCOKE INSECTIONS APPS 176 1977			Based on Chevron
0.00 (per mg/LECPA) 3.75% (per pictor (Mercis Index) 0.000000 (per mg/LECPA) 22 (per pictor (Mercis Index) 12 (per pictor (Mercis Index) 13.75% (per p			
1776 Comparison Merch Horder			
20000000 19 per in planet index 10 per index 10 per in planet index 10 per index			
280			
22 Parts Section discharaged within CES Trepeline			
Color Colo	PCBs		
3.75% per gelion (Merck Indos)	22		
0,000000	3 785		
October Octo			
1	-		
als myl. CCC discharged	DDx		
3.78% per gallon (Merck Index)	12		
Deletin Dele	3.785		
Dickins		kg per mg (Merck Index)	
2 Pyrs facility discharged within Deletine	-	calc kg COC discharged	
Calc mg/L COC discharged Cocker (Index) Cocker (Ind		In a finite attack and take wealth we are	
Sep region (Merck Index) Disconfugation (Merck Index) Disconfugation (Sep region (Merck Index) Disconfu			
Calc kg CCC discharged Control	3.785		
Pyr facility discharged 2		kg per mg (Merck Index)	
21	B1. 1. (5	calc kg COC discharged	
Sample CoC discharged CoC discharg	Dioxilis/1 didiis	#vrs facility discharged	
3.785 Leg ragillon (Merck Index) 0.000001 Rgo pre ing (Merck Index) 0.000001 Rgo pre	21		
0.00001 kg per mg (Merck Index) 0.000001 kg per mg (Merck Index		L per gallon (Merck Index)	
Dioxin/Furan Precursor - 2,4-D	0.000001	kg per mg (Merck Index)	
6 Byr's facility discharged within 2,4-D Timeline		calc kg COC discharged	
Calc mg/L COC discharged CoC dischar		#vrs facility discharged within 2.4-D Timeline	
1.75 1.75			
- calc kg CCC discharged Dioxin/Furan Precursor - 2,4,5-T #yrs facility discharged within 2,4,5-T Timeline			
Dioxin/Furan Precursor - 2,4,5-T			
#yrs facility discharged within 2,4,5-T Timeline		Laic kg COC discharged	
Calc mg/L CCC discharged Calc mg/L CCC disch		#yrs facility discharged within 2,4,5-T Timeline	
0.00001 kg per mg (Merck Index)		calc mg/L COC discharged	
Calc kg COC discharged Calc kg COC dischar			
Dioxin/Furan Precursor - 2,4,6-TCP	0.000001		
#yrs facility discharged within 2,4,6-TCP Timeline	Dioxin/Furan Precursor - 2.4.6-TCP	care ng COC discriatged	
Calc mg/L COC discharged S.785 Lev gallon (Merck Index) Summary DMassCOC for Direct Discharge:		#yrs facility discharged within 2,4,6-TCP Timeline	
0.00001 kg per mg (Merck Index)		calc mg/L COC discharged	
- calc kg COC discharged Summary DMassCOC for Direct Discharge:			
Summary DMassCOC for Direct Discharge:			
- kg Copper - kg Lead - kg Mercury - 345.0627 kg HPAHs - 230.0418 kg LPAHs - kg PCBs - kg D0x - kg D0x - kg D0x - kg D0x	-	Some of Coc discharged	
- kg Copper - kg Lead - kg Mercury - 345.0627 kg HPAHs - 230.0418 kg LPAHs - kg PCBs - kg D0x - kg D0x - kg D0x - kg D0x			
- kg Lead - kg Mercury - 345.0627 kg HPAHs - 230.0418 kg LPAHs - kg PCBs - kg DDx - kg Dieldrin	Summary DMassCOC for Direct Discharge:		
- kg Mercury 345.0627 kg HPAHs 230.0418 kg LPAHs 5 5 5 5 5 5 5 5 5	-		
345.0627 kg HPAHs 230.0418 kg LPAHs - kg PCBs - kg DDx - kg Dieldrin			
230.0418 kg LPAHs - kg PCBs - kg Diskrin - kg Diskrin - kg Diskrin			
- kg PCBs - kg DDx - kg Didrin - kg Diedrin		kg LPAHs	
- kg Dieldrin	-	kg PCBs	
- Ingunomatruma			
	•	ing cronning a draits	

Atlantic Richfield DMass formatted for report 3 ARR2075 Direct_SW_Passa

COMMENTS/NOTES Discharge Calcs **Direct Discharge Information ASSUMPTIONS, REFERENCES** Long term average annual precipitation includes floods and hurricane events 4.08333333 FEET/YEAR AVERAGE PRECIPITATION occurring over time. 14 ACRES - TOTAL SITE AREA (acres) 4.5 ACRES - AFFECTED AREA FDR page 2: Area A consists of 2.5 undeveloped acres located south of the West Facility is adjacent to Passaic River (East Yard of Yard. Additionally, based on google earth imagery, and creating polygons using property boundary abuts river). Chevron FDR page 1. measuring tool, an additional 2 acres of bare soil surrounding the tanks in the West and East Yard combined (grassy areas, see 06/2010 image) were estimated. Total of 4.5 acres of exposed soil. (Google Earth pro image) 4,046.86 METERS²/ACRE 18,211 METERS² (AFFECTED AREA) 0.0001 METERS/YEAR (ERODED SOIL THICKNESS) For this estimate, used a surface soil erosion rate of 0.1 mm/year, or 0.004 inches/year. VOLUME/YEAR DISCHARGED TO PASSAIC RIVER 2 METERS³/YEAR (ERODED SOIL VOLUME) FDR Page 1: ARCO owned and operated the facility sometime in the 1930s. This

The Newark Terminal was operated as a petroleum storage and distribution facility (Chevron FDR Page 1930 Year site operations began calculation assumes 1930. 1951 Year site processing and storage operations ceased FDR Page 1: ARCO conveyed the site to Tide Water Associated Oil Company on July FDR Page 2: Facility operations were limited to bulk The terminal was used to store and distribute Aerial photographs 23, 1951 refined petroleum products. It is believed that identified 11 tanks at products were received via a pipeline system and the site and 2 docks by barge, and that products were distributed via that appeared to be tanker trucks. (Chevron FDR page 1) leading to the Passaic River in 1943. The West Yard included three additional large storage tanks surrounded by concrete walls, a gasoline pump storage building, and an unlabeled building (Chevron FDR page 2) 21 NUMBER YEARS DISCHARGE ARCO liability 21 years, 1930 to 1951 (FDR, page 1-2) 38.242827 METERS3 (TOTAL SOIL VOLUME DISCHARGED OVER TIME) 1962.5 KG/M3 SOIL DENSITY Shallow borings from Area A were composed of a mixture of sand, silt, and gravel with varying amounts of brick fragments, rocks, wood and other debris (PAP-00066671, PDF page 8). Used "silty sand and gravel" soil type from http://structx.com/Soil_Properties_002.html. Bulk density range 1442 KG/M3 to 2483 KG/M3, so use average. 75,052 KILOGRAMS (TOTAL SOIL DISCHARGED OVER TIME) Copper (Cu) Copper in included in this calculation even though it is not identified as a COC in the 21 YEARS DISCHARGED FDR (page 4) because it has been detected on site. 0 MG/KG (MAX CONCENTRATION) NOTE: No onsite sampling data were available for the time period during which ARCO owned/operated the Terminal; therefore, the data from the Chevron F&T calculation (same location) has been used for these calculations. Set to 0 since less than HF. 0.000001 kg per mg (Merck Index) 0 KILOGRAMS DISCHARGED

Lead (Pb)

21 YEARS DISCHARGED

0 MG/KG (MAX CONCENTRATION)
0.000001 kg per mg (Merck Index)

0 KILOGRAMS DISCHARGED

PAHs (listed in Benzo(a)pyrene Equivalent conversion table)

21 YEARS DISCHARGED

26.586 MG/KG (TOTAL PAH MAX CONCENTRATION)

0.000001 kg per mg (Merck Index)

2 KILOGRAMS DISCHARGED

PAHs (others detected)

21 YEARS DISCHARGED

MG/KG (TOTAL PAH MAX CONCENTRATION)

122

0.000001 kg per mg (Merck Index) 9 KILOGRAMS DISCHARGED

PCBs

21 YEARS DISCHARGED

67 MG/KG (MAX OF REPORTED CONCENTRATIONS)

0.000001 kg per mg (Merck Index)

5 KILOGRAMS DISCHARGED

SUMMARY CMASS ESTIMATES:

0.00 kg Copper

0.00 kg Lead

2.00 kg PAHs (Benzo(a)pyrene Equivalent)

9.16 kg PAHs (Other) 5.03 kg PCBs

16.18 MASS (KG) DISCHARGED FROM SURFACE SOIL

Maximum concentration in onsite soils (Chevron FDR Page 10, Table) Concentration changed to 0 mg/kg because the Chevron FDR incorrectly has a concentration of 84,200 mg/kg. The referenced source shows a maximum lead concentration of 8,200 mg/kg (PAP-00339532). This is set to 0 because it is less than HF.

Total concentration of PAH compounds for Benzo(a)pyrene Equivalent https://floridadep.gov/waste/petroleum-restoration/documents/benzo-pyrene-equivalents-conversion-table-one-sample.

Sum of Benzo(a)pyrene Equivalent conversion concentrations. Historic fill was not a consideration for PAH concentrations for the purpose of this calculation.

Other PAHs detected = Benzo(g,h,i)perylene, Fluoranthene, Phenanthrene, Pyrene (Figure PAP-00066671, pdf pg 38)

Sum of other detected PAHs from Figure PAP-00066671, pdf pg 38 from Sample ID A-2A (0.0-0.5 ft). Historic fill was not a consideration for PAH concentrations for the purpose of this calculation.

	Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
Maximum concentrations found in surface sample A-	Benzo(a)pyrene	19.000	1.0	19.0000
2A (0.0-0.5 ft) (PAP-00066671, PDF pg 38).				
	Benzo(a)anthracene	12.000	0.1	1.2000
	Benzo(b)fluoranthene	23.000	0.1	2.3000
	Benzo(k)fluoranthene	26.000	0.01	0.2600
	Chrysene	26.000	0.001	0.0260
	Dibenz(a,h)anthracene	2.800	1.0	2.8000
	Indeno(1,2,3-cd)pyrene	10.000	0.1	1.0000

DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg

Total Benzo(a)pyrene Equivalents = 26.6

Historic aerial photographs revealed that Area A has undergone filling activities, which are the likely source of PCBs (PAP-00066682).

PCB (Aroclor 1254) highest concentrations ranging from 10mg/kg to 67 mg/kg (Area 2; SW-75C at 0-0.5 ft) detected along the southern perimeter. (Chevron FDR page

4)
Historic fill was not a consideration for PCBs concentrations for the purpose of this

calculation.

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)
Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Protocol Calculation

Atlantic Richfield (ARCO)

86 Doremu	s Aven	ue	Newark	NJ	07105				
Facility BS	CUF	CUF_Catego	ry	CUF_NOTES				COF_NOTES	Facillty Adjusted BS
2.625E-5	0.0%	Historically Compliant or	No Evidence N	o information on violations or sloppy practices was identified in the available file material.				-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities	2.100E-5
								AP_ABS	2.100E-5

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Allocation Calculation

Atlantic Richfield (ARCO)

86 Doremu	s Aven	ue	Newark	NJ	07105				
Facility BS	CUF	CUF_Catego	ry	CUF_NOTES				COF_NOTES	Facillty Adjusted BS
3.231E-3	0.0%	Historically Compliant or	No Evidence N	information on violations or sloppy practices was identified in the available file material.				-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities	2.585E-3
								AP_ABS	2.585E-3

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Allocation Facility Cmass Calculation

Atlas Refining Inc. **142 Lockwood Street** NJ 07105 Newark

Constituent Of Concern (COC)	Overland, Fate &	Dmass Overland,	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge	Dmass Direct Discharge	COC Total Pathway	COC A%	COC Historic CMass
	Transport C%	Fate & Transport					C%		Cmass		
Copper	100.00%	-	100.00%	190.19	0.00%	1,271.90	100.00%	336.3	526.45	1.018817E-2	5.36
Lead	100.00%	-	100.00%	649.10	0.00%	4,340.85	100.00%	1,147.6	1,796.69	1.018817E-2	18.31
Mercury	100.00%	-	100.00%	0.11	0.00%	0.73	100.00%	0.2	0.3	1.018817E-2	0
HPAHs	100.00%	-	100.00%	1,588.59	0.00%	10,623.71	100.00%	2,808.6	4,397.19	1.018817E-2	44.8
LPAHs	100.00%	-	100.00%	1,059.06	0.00%	7,082.47	100.00%	1,872.4	2,931.46	1.018817E-2	29.87
PCBs	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
DDx	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Protocol Calculation

Atlas Refining Inc. 142 Lockwood Street 07105 Newark NJ

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	5.36	2.554E-6	1.762E-6
Lead	0.01	3,200,000.00	18.31	5.720E-6	5.720E-8
Mercury	0.95	42,000.00	0	7.372E-8	7.003E-8
HPAHs	0.05	240,000.00	44.8	1.867E-4	9.333E-6
LPAHs	0.01	170,000.00	29.87	1.757E-4	1.757E-6
PCBs	12.87	26,000.00	0	0	0
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	7.507E-9	6.300E-7

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Alternative Calulcation

Atlas Refining Inc.	142 Lockwood Street	Newark	NJ	07105

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	1.901E-3	5.36	3,986.31	1.901E-3	1.312E-3
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	6.226E-3	18.31	19,905.	6.226E-3	6.226E-5
Mercury	0.95	42,000.00	4,322.53	41,955.96	7.030E-5	0	2.95	7.030E-5	6.679E-5
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	1.012E-3	44.8	198.01	1.012E-3	5.058E-5
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	9.730E-4	29.87	135.54	9.730E-4	9.730E-6
PCBs	12.87	26,000.00	20,066.54	25,795.56	0	0	0	0	0
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	7.507E-9	0	0	7.507E-9	6.300E-7

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Facility Bypass Information

Atlas Refining Inc. 142 Lockwood Street Newark NJ 07105

Item	Bypass Name				Bypass Notes
1	Newark Bay	wark Bay Bypass 0.00% 0.00%		0.00%	Did not discharge waste into the Passaic river

Dicharge Calcs	POTW Discharge Information	COMMENTS/NOTES
8,576	gal discharged per day (PAS00072817, PAS00072990, PAS00103218)	PVSC Waste Effluent Survey(s), PVSC Permit(s)
-	# hours/per day discharged	
5	#days/week discharged	Discharged all wastewater to sanitary sewer since development of PVSC System prior to that assume to Passaic River
52	#weeks/yr discharged	
2,229,863		
1020	Va One shorted	
	Yr Ops started Yr Ops ceased	
	calc #yrs facility operated	
Copper (Cu)		
100	#yrs facility discharged calc mg/L COC discharged (PAS00072970, PAS00103451, PAP00051987,	PVSC Waste Effluent Surveys, PVSC Heavy Metal Source Determination, PVSC Application for Sewer Connection(s),
1.73	PAS00114149, PAS00072817, PAS00103218)	PVSC User Self Monitoring Report(s)
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
Lead (Pb)	#yrs facility discharged	
5.91		PVSC Waste Effluent Surveys, PVSC Heavy Metal Source Determination, PVSC Application for Sewer Connection(s),
	PAS00103451, PAP00051987)	PVSC User Self Monitoring Report(s)
3.785	L per gallon (Merck Index)	
0.000001 4,989.95	kg per mg (Merck Index) calc kg COC discharged	
Mercury (Hg)	tait kg COC discharged	
100	#yrs facility discharged	
0.0010	calc mg/L COC discharged (PAS00114153, PAP00051987)	PVSC Heavy Metal Source Determination & PVSC User Self Monitoring Report(s)
3.785 0.000001		
0.000001		
HPAHs		
100	#yrs facility discharged	
241.16 10%	calc mg/L O&G (PAS00051978, PAS00072817, PAS00103218) % O&G that is considered PAHs	calcs used to convert mg/kg O&G to HPAHs; remove if not needed PVSC User Self Monitoring Reports, PVSC Permits, PVSC Waste Effluent Surveys
10%		r vac user aem monitoring reports, pyac permits, pyac waste effluent surveys
14	calc mg/L HPAHs	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
12,212.30 LPAHs	calc kg COC discharged	
100	#yrs facility discharged	
	calc mg/L O&G (PAS00051978, PAS00072817, PAS00103218)	calcs used to convert mg/kg O&G to LPAHs; remove if not needed
	% O&G that is considered PAHs	PVSC User Self Monitoring Reports, PVSC Permits, PVSC Waste Effluent Surveys
	% PAHs considered as LPAHs calc mg/L LPAHs	
3.785	L per gallon (Merck Index)	
0.000001		
	calc kg COC discharged	
PCBs 40	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001		
DDx	calc kg COC discharged	
	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785		
0.000001	kg per mg (Merck Index) calc kg COC discharged	
Dieldrin	care ng coc aistinargea	
38	#yrs facility discharged within Dieldrin Timeline	
- 2 705	calc mg/L COC discharged	
	L per gallon (Merck Index) kg per mg (Merck Index)	
0.000001	calc kg COC discharged	
Dioxins/Furans		
100		
3.785	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D	Harry Coulder development and the Council of the Co	
75	#yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged	
3.785		
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T	#yrs facility discharged within 2,4,5-T Timeline	
- 41	#yrs facility discharged within 2,4,5-1 Timeline calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
Dioxin/Furan Precursor - 2,4,6-TCP	calc kg COC discharged	
	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
	L per gallon (Merck Index)	
3.785 0.000001		
	kg per mg (Merck Index) calc kg COC discharged	
0.000001 - Summary DMassCOC for POTW:	calc kg COC discharged	
0.000001 - Summary DMassCOC for POTW: 1,462.09	calc kg COC discharged	
0.000001	calc kg COC discharged kg Copper kg Lead	
0.000001 - Summary DMassCOC for POTW: 1,462.09 4,989.95 0.84	calc kg COC discharged kg Copper kg Lead	
0.000001	calc kg COC discharged kg Copper kg Lead kg Mercury kg HPAHs kg LPAHs	
Summary DMassCOC for POTW: 1,462.09 4,989.95 0.84 12,212.30 8,141.53	calc kg COC discharged kg Copper kg Lead kg Mercury kg HPAHS kg PABS	
0.000001	calc kg COC discharged kg Copper kg Lead kg Mercury kg HPAHs kg LPAHs	

Atlas Refining Inc DMass formatted for report 1 ARR 2084 POTW_PVSC

Discharge Calcs	Direct Discharge Information	COMMENTS/NOTES
	# hours/day discharged	
	# days/week discharged # weeks/yr discharged	Assume direct discharge to Passaic prior to PVSC installation (assume 1920)
	# gals/yr directly discharged	Assume same discharge concentrations as to the PVSC
4.08	ft; 30yr average annual precipitation per Rutgers information acres	
43,560	ft2 per acre	
	Yr Ops started	
	Yr Ops ceased calc #yrs facility operated	
	, , ,	
Copper (Cu)		
	#yrs facility discharged calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
Lead (Pb)	#yrs facility discharged	
5.91	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index) calc kg COC discharged	
Mercury (Hg)		
23	#yrs facility discharged	
	calc mg/L COC discharged	
	L per gallon (Merck Index) kg per mg (Merck Index)	
0.194	calc kg COC discharged	
HPAHs		
23	#yrs facility discharged calc mg/L O&G (PAS00051978, PAS00072817, PAS00103218)	
241.16	% O&G that is considered PAHs	
60%	% PAHs considered as HPAHs	
14	calc mg/L HPAHs	
3.785 0.000001	L per gallon (Merck Index) kg per mg (Merck Index)	
	calc kg COC discharged	
LPAHs		
23	#yrs facility discharged	
	calc mg/L O&G (PAS00051978, PAS00072817, PAS00103218) % O&G that is considered PAHs	
	% PAHs considered as LPAHs	
	calc mg/L LPAHs	
	L per gallon (Merck Index)	
	kg per mg (Merck Index) calc kg COC discharged	
PCBs	tale ing coc distributed	
	#yrs facility discharged within PCBs Timeline	
2.705	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
-19	#yrs facility discharged within DDx Timeline calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
- Dialdaia	calc kg COC discharged	
Dieldrin -29	#yrs facility discharged within Dieldrin Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index) calc kg COC discharged	
Dioxins/Furans		
23	#yrs facility discharged	
3.705	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D	II of other dealers of the SART C	
-25	#yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
- Dioxin/Furan Precursor - 2,4,5-T	calc kg COC discharged	
	#yrs facility discharged within 2,4,5-T Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index) calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
	#yrs facility discharged within 2,4,6-TCP Timeline	
3.785	calc mg/L COC discharged L per gallon (Merck Index)	
	L per gallon (Merck Index) kg per mg (Merck Index)	
	calc kg COC discharged	
Summary DMassCOC for Direct Direct		
Summary DMassCOC for Direct Discharge: 336.2547	kg Copper	
1,147.5954	kg Lead	
0.1941	kg Mercury	
	kg HPAHs	<u> </u>
1,872.4020 -	kg LPAHs kg PCBs	
-	kg DDx	
	kg Dieldrin	
-	kg Dioxins/Furans	

Atlas Refining Inc DMass formatted for report 3 ARR2085 Direct_SW_Passa

Discharge Calcs ASSUMPTIONS, REFERENCES COMMENTS/NOTES **Direct Discharge Information** 4.08 FEET/YEAR AVERAGE PRECIPITATION Long term average annual precipitation includes floods and hurricane events Data from Rutgers University. occurring over time. 2.0356 ACRES - TOTAL SITE AREA (acres) 0.50 ACRES - AFFECTED AREA Rough estimate of site area with exposed fill determined from review of historical aerial photographs 1995-2020 and Figure (FDR, Page 7). Assume no asphalt until 1960 (50 percent coverage) and 100 percent after for an estimated 0.5 acres. 4,046.86 METERS²/ACRE 2,023 METERS² (AFFECTED AREA) 0.0001 METERS/YEAR (ERODED SOIL THICKNESS) For this estimate, used a surface soil erosion rate of 0.1 mm/year, or 0.004 inches/year. VOLUME/YEAR DISCHARGED TO PASSAIC RIVER 0 METERS³/YEAR (ERODED SOIL VOLUME) 1897 Year site operations began FDR, Page 1 2020 Year site processing and storage operations ceased Present (FDR, Page 1) 123 NUMBER YEARS DISCHARGE Atlas Refinery liability 123 years, 1897 to present (FDR, page 1) 25 METERS³ (TOTAL SOIL VOLUME DISCHARGED OVER TIME) 1,963 KG/M³ SOIL DENSITY Silty sand and gravel (PAS-00052052). Bulk density range for silty sand and gravel 1442 KG/M3 to 2483 KG/M3, so use average. (http://structx.com/Soil_Properties_002.html) 48,856 KILOGRAMS (TOTAL SOIL DISCHARGED OVER TIME) Partially located on historic fill. Metals concentrations on FDR Page 6 are below Historic Fill (FDR page 5-6) No soil results found for PCBs, PAHs, and pesticides. Copper (Cu) NONE FOUND IN AVAILABLE DOCUMENTATION 123 YEARS DISCHARGED 0 MG/KG (MAX CONCENTRATION) 0.000001 kg per mg (Merck Index) 0.00 KILOGRAMS DISCHARGED Lead (Pb) NONE FOUND IN AVAILABLE DOCUMENTATION 123 YEARS DISCHARGED 0 MG/KG (MAX CONCENTRATION) 0.000001 kg per mg (Merck Index) 0.00 KILOGRAMS DISCHARGED Mercury (Hg) NONE FOUND IN AVAILABLE DOCUMENTATION

Total concentration of PAH compounds for Benzo(a)pyrene Equivalent https://floridadep.gov/waste/petroleum-restoration/documents/benzo-pyrene-equivalents-conversion-table-one-sample.

NONE FOUND IN AVAILABLE DOCUMENTATION

NONE FOUND IN AVAILABLE DOCUMENTATION

Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
Benzo(a)pyrene	0.000	1.0	0.0000
Benzo(a)anthracene	0.000	0.1	0.0000
Benzo(b)fluoranthene	0.000	0.1	0.0000
Benzo(k)fluoranthene	0.000	0.01	0.0000
Chrysene	0.000	0.001	0.0000
Dibenz(a,h)anthracene	0.000	1.0	0.0000
Indeno(1,2,3-cd)pyrene	0.000	0.1	0.0000

Total Benzo(a)pyrene Equivalents = 0.0

DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg

PAHs (listed in Benzo(a)pyrene

Equivalent conversion table)

PAHs (others detected)

123 YEARS DISCHARGED

0.000001 kg per mg (Merck Index)
0.00 KILOGRAMS DISCHARGED

123 YEARS DISCHARGED

0.000001 kg per mg (Merck Index)

123 YEARS DISCHARGED

0.000001 kg per mg (Merck Index)
0.00 KILOGRAMS DISCHARGED

0.00 KILOGRAMS DISCHARGED

0 MG/KG (MAX CONCENTRATION)

0.0 MG/KG (TOTAL PAH AVERAGE CONCENTRATION)

0 MG/KG (TOTAL PAH MAX CONCENTRATION)

```
PCBs
                                NONE FOUND IN AVAILABLE DOCUMENTATION
                              90 YEARS DISCHARGED
                              0 MG/KG (MAX CONCENTRATION)
                      0.000001 kg per mg (Merck Index)
0.00 KILOGRAMS DISCHARGED
                              0 NONE FOUND IN AVAILABLE DOCUMENTATION
                              0 MG/KG (MAX CONCENTRATION)
                          3.785 L per gallon (Merck Index)
                       0.000001 kg per mg (Merck Index)
                               0 KILOGRAMS DISCHARGED
                              0 NONE FOUND IN AVAILABLE DOCUMENTATION
                              0 MG/KG (MAX CONCENTRATION)
                          3.785 L per gallon (Merck Index)
                       0.000001 kg per mg (Merck Index)
                              0 KILOGRAMS DISCHARGED
Dioxins/Furans
                        0.00057 MG/KG (MAX CONCENTRATION)
                                                                                      PAS-00125488
                       0.000001 kg per mg (Merck Index)
                       0.000028 calc kg COC discharged
SUMMARY CMASS ESTIMATES:
                           0.00 kg Copper
                           0.00 kg Lead
                           0.00 kg Mercury
                           0.00 kg PAHs (Benzo(a)pyrene Equivalent)
                           0.00 kg PAHs (Other)
                           0.00 kg PCBs
                           0.00 kg DDx
                           0.00 kg Dieldrin
                       0.000028 kg Dioxins/Furans
```

0.000028 MASS (KG) DISCHARGED FROM SURFACE SOIL

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)
Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Protocol Calculation

Atlas Refining Inc.

142 Lockwo	ood Stree	et	Newark	NJ	07105				
Facility BS	CUF	CUF_Catego	ory		С	UF_NOTES	COF	COF_NOTES	Facillty Adjusted BS
1.361E-5	10.0%	Periodic Noncom	we Ac rev sy: frc 00 in	ere related to spills an tion Complaint filed it woked stating that the stems were functioning om 1986 to 1989 (PAS 052028). In addition the railyard near the	nd poor housekeeping in the Superior Courte petroleum hydrocang improperly. The S-00052011-12). At land, in at least the earl Central Railroad trad	g; PAS-00052130-31) and 1981 (PAS-00072987) that ag practices at the facility. In a March 8, 1989 Civil of New Jersey, PVSC requested the permit be arbon content control system and other pretreatment complaint noted that violations were issued to Atlas as installed a Pretreatment System in 1986 (PAS-y 1970s, oil was released as a result of Atlas activities cks, and during periods of rainfall this material drained eatch basin and thus the Passaic River.	0.0%	0% Cooperation with conduct of allocation and requests for related information	1.497E-5
								AP_ABS	1.497E-5

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Allocation Calculation

Atlas Refining Inc.

142 Lockwo	ood Street		Newark	NJ	07105				
Facility BS	CUF	CUF_Catego	ry		CI	JF_NOTES	COF	COF_NOTES	Facillty Adjusted BS
1.502E-3	10.0%	Periodic Noncom		vere related to spills a Action Complaint filed evoked stating that th ystems were functior rom 1986 to 1989 (PA 00052028). In addition the railyard near the	and poor housekeepin in the Superior Court he petroleum hydroca ling improperly. The c AS-00052011-12). Atla on, in at least the early e Central Railroad trac	PAS-00052130-31) and 1981 (PAS-00072987) that g practices at the facility. In a March 8, 1989 Civil of New Jersey, PVSC requested the permit be roon content control system and other pretreatment omplaint noted that violations were issued to Atlas is installed a Pretreatment System in 1986 (PAS-7 1970s, oil was released as a result of Atlas activities ks, and during periods of rainfall this material drained atch basin and thus the Passaic River.	0.0%	0% Cooperation with conduct of allocation and requests for related information	1.652E-3
								AP_ABS	1.652E-3

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Allocation Facility Cmass Calculation

Automatic Electro Plating Corp. (Foundry Street Complex)

185 Foundry Street

Newark

NJ

07105

Constituent Of Concern (COC)	Overland, Fate & Transport	Dmass Overland, Fate &	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
	C%	Transport									
Copper	100.00%	-	100.00%	-	0.00%	78.44	100.00%	-	0	1.018817E-2	0
Lead	100.00%	-	100.00%	-	0.00%	28.07	100.00%	-	0	1.018817E-2	0
Mercury	100.00%	-	100.00%	-	0.00%	0.35	100.00%	-	0	1.018817E-2	0
HPAHs	100.00%	-	100.00%	-	0.00%	86.36	100.00%	-	0	1.018817E-2	0
LPAHs	100.00%	-	100.00%	-	0.00%	57.57	100.00%	-	0	1.018817E-2	0
PCBs	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
DDx	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.00%	-	100.00%		0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Protocol Calculation

Automatic Electro Plating Corp. (Foundry Street Complex)

185 Foundry Street

Newark

NJ

07105

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	0	0	0
Lead	0.01	3,200,000.00	0	0	0
Mercury	0.95	42,000.00	0	0	0
HPAHs	0.05	240,000.00	0	0	0
LPAHs	0.01	170,000.00	0	0	0
PCBs	12.87	26,000.00	0	0	0
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Allocation Facility COC Base Scores - Alternative Calulcation

Automatic Electro Plating Corp. (Foundry Street Comp

185 Foundry Street

Newark

NJ

07105

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	0	0	0	0	0
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	0	0	0	0	0
Mercury	0.95	42,000.00	4,322.53	41,955.96	0	0	0	0	0
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	0	0	0	0	0
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	0	0	0	0	0
PCBs	12.87	26,000.00	20,066.54	25,795.56	0	0	0	0	0
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Facility Bypass Information

Automatic Electro Plating Corp. (Foundry Street Complex) 185 Foundry Street Newark NJ 07105

Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Newark Bay	Bypass	0.00%	0.00%	Did not discharge waste into the Passaic river

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
	gal discharged per day/week/month	
	# hours/per day discharged #days/week discharged	
	#weeks/yr discharged	
2,173,003	# gal/yr discharge (FDR) (PAS-00114059, 114450)	
	Yr Ops started (FDR)	
	Yr Ops ceased (FDR) calc #yrs facility operated	
33	taic #yrs raciirty operateu	
Copper (Cu)		
35	#yrs facility discharged	
0.27	calc mg/L COC discharged (FDR) (PAS-00114059, 114450; PAS-00114059,	
2 705	114149) L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
Lead (Pb)		
	#yrs facility discharged	
0.098	calc mg/L COC discharged; (FDR) (PAS-00114059, 114450; PAS-00114059,	
3 785	114149) L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
Mercury (Hg)		
	#yrs facility discharged	
0.0012	calc mg/L COC discharged; (FDR) (PAS-00114059, 114450; PAS-00114059, 114149)	
3 785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
0.35	calc kg COC discharged	
HPAHs		
	#yrs facility discharged	
	calc mg/L O&G (FDR); (PAS-00114059, 114450) % O&G that is considered PAHs	
	% PAHs considered as HPAHs	
0.30	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index) calc kg COC discharged	
LPAHs 86	caic kg COC discharged	
	#yrs facility discharged	
	calc mg/L O&G	
	% O&G that is considered PAHs	
	% PAHs considered as LPAHs	
	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
PCBs		
8	#yrs facility discharged within PCBs Timeline	
2.705	calc mg/L COC discharged	
	L per gallon (Merck Index) kg per mg (Merck Index)	
	calc kg COC discharged	
DDx		
3	#yrs facility discharged within DDx Timeline	
2 705	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
Dieldrin		
18	#yrs facility discharged within Dieldrin Timeline	
A ===	calc mg/L COC discharged	
	L per gallon (Merck Index) kg per mg (Merck Index)	
	calc kg COC discharged	
Dioxins/Furans		
	#yrs facility discharged	
*	calc mg/L COC discharged	
	L per gallon (Merck Index) kg per mg (Merck Index)	
	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
36	#yrs facility discharged within 2,4-D Timeline	
3.705	calc mg/L COC discharged L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
16	#yrs facility discharged within 2,4,5-T Timeline	
2 = 2 =	calc mg/L COC discharged	
	L per gallon (Merck Index) kg per mg (Merck Index)	
	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
	#yrs facility discharged within 2,4,6-TCP Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index) kg per mg (Merck Index)	
	calc kg COC discharged	
Summary DMassCOC for POTW:		
	kg Copper	
	kg Lead	
	kg Mercury kg HPAHs	
	kg LPAHs	
-	kg PCBs	
-	kg DDx	
	kg Dieldrin	
-	kg Dioxins/Furans	

Automatic Electro Plating Corp (NP) formatted for report 1 ARR2094 POTW_PVSC

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)
Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Protocol Calculation

Automatic Electro Plating Corp. (Foundry Street Complex)

185 Foundi	ry Street		Newark	NJ	07105				
Facility BS	CUF	CUF_Catego	ry		C	UF_NOTES	COF	COF_NOTES	Facillty Adjusted BS
0	10.0%	Periodic Noncom		Act, 33 U.S.C. Subsect pertains to toxic and records.) "AEP considered for ement actions filed by USEPA, Region the pending actions "Foundry Street Comma material storage and actions and the pending actions and the pending actions are material storage and pertain storage and pertain storage and pertain storage and pertain storage are pertained by the pending actions are pending actions and pending actions are pending actions and pending actions are pending actions are pending actions and pending actions are pending actions.	tion 1317, and Subsect pre-treatment effluent stently failed to meet e by the USEPA in 1986" on 2, and AEP signed a G PAS-00000193; PAS-00 plex Site Inspection" re ea located on the south cimately 2' x 2', appeare	plation of Sections 307 and 308 of the Clean Water ion 1318" (PAS-00000193). (Note: Subsection 1317 standards and Subsection 1318 pertains to access to lectro-plating discharge standards which initiated (PAS-00000228). A Civil-Action Suit (86-0920) was consent Decree on April 15, 1987 for settlement of 1014392). It is also noted that according to a port prepared by NJDEP, dated November 15, 1990, a side of Building 19 appeared to be stained and that ed to be saturated with oil" near the northwest		20% Failed to participate in conduct of allocation as offered by EPA	0
								AP ABS	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Allocation Calculation

Automatic Electro Plating Corp. (Foundry Street Complex)

185 Found	ry Street		Newark	NJ	07105				
Facility BS	CUF	CUF_Catego	ry		С	UF_NOTES	COF	COF_NOTES	Facillty Adjusted BS
0	10.0%	Periodic Noncom		Act, 33 U.S.C. Subse pertains to toxic and records.) "AEP cons enforcement action filed by USEPA, Regi the pending actions "Foundry Street Cor a material storage a	ction 1317, and Subsect I pre-treatment effluent istently failed to meet et is by the USEPA in 1986' on 2, and AEP signed (PAS-00000193; PAS-00 inplex Site Inspection'' rurea located on the sout ximately 2' x 2', appear	plation of Sections 307 and 308 of the Clean Water ion 1318" (PAS-00000193). (Note: Subsection 1317 is standards and Subsection 1318 pertains to access to electro-plating discharge standards which initiated (PAS-00000228). A Civil-Action Suit (86-0920) was Consent Decree on April 15, 1987 for settlement of 0014392). It is also noted that according to a export prepared by NJDEP, dated November 15, 1990, in side of Building 19 appeared to be stained and that ed to be saturated with oil" near the northwest		20% Failed to participate in conduct of allocation as offered by EPA	0
								AP ABS	0

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Allocation Facility Cmass Calculation

BASF Catalysts LLC 1 West Central Avenue NJ 07032 East Newark

Constituent Of Concern (COC)	Overland, Fate & Transport	Dmass Overland, Fate &	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
Copper	C% 100.00%	Transport 26.28	100.00%	-	0.23%	1,152.72	100.00%	_	28.92	1.018817E-2	0.29
Lead	100.00%	62.56	100.00%	-	0.23%	268.41	100.00%	-	63.18	1.018817E-2	0.64
Mercury	100.00%	17.12	100.00%	-	0.23%	38.00	100.00%	-	17.21	1.018817E-2	0.18
HPAHs	100.00%	0.48	100.00%	-	0.23%	963.81	100.00%	-	2.69	1.018817E-2	0.03
LPAHs	100.00%	3.37	100.00%	-	0.23%	642.54	100.00%	-	4.84	1.018817E-2	0.05
PCBs	100.00%	0.02	100.00%	-	0.23%	-	100.00%	-	0.02	1.018817E-2	0
DDx	100.00%	-	100.00%	-	0.23%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.23%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.23%	-	100.00%	-	0	1.018817E-2	0

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Allocation Facility COC Base Scores - Protocol Calculation

BASF Catalysts LLC 1 West Central Avenue 07032 East NJ Newark

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	0.29	1.403E-7	9.682E-8
Lead	0.01	3,200,000.00	0.64	2.011E-7	2.011E-9
Mercury	0.95	42,000.00	0.18	4.174E-6	3.965E-6
HPAHs	0.05	240,000.00	0.03	1.141E-7	5.707E-9
LPAHs	0.01	170,000.00	0.05	2.902E-7	2.902E-9
PCBs	12.87	26,000.00	0	7.837E-9	1.009E-7
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

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Allocation Facility COC Base Scores - Alternative Calulcation

BASF Catalysts LLC	1 West Central Avenue	East	NJ	07032	
		Newark			

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	1.044E-4	0.29	219.	1.044E-4	7.205E-5
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	2.189E-4	0.64	699.9	2.189E-4	2.189E-6
Mercury	0.95	42,000.00	4,322.53	41,955.96	3.981E-3	0.18	167.02	3.981E-3	3.782E-3
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	6.186E-7	0.03	0.12	6.186E-7	3.093E-8
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	1.607E-6	0.05	0.22	1.607E-6	1.607E-8
PCBs	12.87	26,000.00	20,066.54	25,795.56	9.967E-7	0	0.03	9.967E-7	1.283E-5
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Facility Bypass Information

BASF Catalysts LLC 1 West Central Avenue East Newark NJ 07032

Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Central Ave	CSO	0.37%	61.94%	

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
	gal/day discharged	note -owned since 1935; The 1950 Sanborn map describes the buildings on site as Auto Repair,
		Auto Paint/Spraying, and Auto Showroom; The Clark Thread Company operated at the East Newark site from 1899 to 1935, including a bleach house (APQ); AP believes POTW constructed in the area by 1924 (APQ)
		to 1955, including a bleach flouse (ArQ), Ar believes FOTW constructed in the area by 1924 (ArQ)
8	#hours/day discharged (FDR) (PAP-000-50552)	
286	#days/yr discharged (PAP-00094033)	
	#days/week discharged	
	#weeks/yr discharged calc gal/yr discharge;	(FDR) (PAP-00050552, PAP-00054004, PAP-00054015, PAP-0050482, PAP-00050569, PAP-00054033)
8,097,232	calc gal/yr discrial ge,	(FDR) (FAR-00030332, FAR-00034004, FAR-00034013, FAR-0030462, FAR-00030303, FAR-00034033)
	Yr Ops started (FDR) Yr Ops ceased (FDR)	
	calc #yrs facility operated	
Copper (Cu)		
52		
0.67	00050504, PAP-000505059, PAP-00054033)	
3.785		
0.000001		
1,153	calc kg COC discharged	
Lead (Pb)		
52 0.157		
0.157	00050504, PAP000050569, PAP-00054033)	
2 705	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
268	calc kg COC discharged	
Mercury (Hg)		
52	#yrs facility discharged	
0.022	calc mg/L; (FDR) (PAP-00050552, PAP-00054004, PAP-00054015, PAP- 00050504, PAP000050569, PAP-00054033)	
	L per gallon (Merck Index) kg per mg (Merck Index)	
38	calc kg COC discharged	
HPAHs		
52	#yrs facility discharged	
9.4	calc O&G mg/L; (FDR) (PAP-00050552, PAP-00054004, PAP-00054015, PAP000050569, PAP-00054033)	use of PAH-containing materials, eg, fuel oil stored in ASTs/USTs used to power equipment; historic coal pile on northern part of site, use discontinued in 1970s; boilers/incinerators used on site
10%	% O&G that is considered HPAHs	northern part or site, use discontinued in 1970s; boilers/incinerators used on site
	% PAHs considered as PAHs	
0.6		
3.785	permit application (PAP-00050573)	
	L per gallon (Merck Index) kg per mg (Merck Index)	
	calc kg COC discharged	
LPAHs		2000 permit application re LPAH naphthalene - "expected to be present" (PAP-00050571)
	#yrs facility discharged	
9.4	calc O&G mg/L; (FDR) (PAP-00050552, PAP-00054004, PAP-00054015,	
10%	PAP000050569, PAP-00054033) % O&G that is considered PAHs	
	% PAHs considered as LPAHs	
0.4		
0.4	calc mg/E Er Aris in reported Toc discharge analysis provided with 2000	
	permit application (PAP-00050573)	
3.785	permit application (PAP-00050573) L per gallon (Merck Index)	
3.785 0.000001	permit application (PAP-00050573) L per gallon (Merck Index) kg per mg (Merck Index)	
3.785 0.000001	permit application (PAP-00050573) L per gallon (Merck Index)	2000 permit application - "known to be absent" (PAP-00050571)
3.785 0.00001 643 PCBs	permit application (PAP-00050573) L per galion (Merck Index) kg per mig (Merck Index) calc kg COC discharged #yrs facility discharged within PCBs Timeline	2000 permit application - "known to be absent" (PAP-00050571)
3.785 0.000001 643 PC8s 2:	permit application (PAP-00050573) Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged	2000 permit application - "known to be absent" (PAP-00050571)
3.785 0.000001 643 PCBs 2: 3.785	permit application (PAP-00050573) L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged L per gallon (Merck index)	2000 permit application - "known to be absent" (PAP-00050571)
3.785 0.000001 643 PCBs 2: 3.785	permit application (PAP-00050573) Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged	2000 permit application - "known to be absent" (PAP-00050571)
3.785 0.00001 643 PCBs 2: 3.785 0.00001 DDx	permit application (PAP-00050573) L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged L per gallon (Merck index) kg per mg (Merck index) calc kg COC discharged	2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571)
3.785 0.00001 643 PCBs 2: 3.785 0.00001 DDx	permit application (PAP-00050573) Lper gallon (Merck index) kg per mg (Merck index) calc kg CDC discharged #yrs facility discharged within PCBs Timelline calc mg/L CDC discharged Lper gallon (Merck index) kg per mg (Merck index) calc kg CDC discharged #yrs facility discharged #yrs facility discharged #yrs facility discharged #yrs facility discharged within DDx Timeline	
3.785 0.00001 643 PCBS 2: 3.785 0.00001 DDX 16	permit application (PAP-00050573) L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) dalk g COC discharged Lyrs facility discharged within DDx Timeline calc mg/L COC discharged divs facility discharged within DDx Timeline calc mg/L COC discharged	
3.785 0.000001 643 PCBS 2: 3.785 0.000001 DDx 11	permit application (PAP-00050573) Lper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged Lper gallon (Merck Index)	
3.785 0.000001 643 PCBS 2: 3.785 0.000001 DDx 11	permit application (PAP-00050573) L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) dalk g COC discharged Lyrs facility discharged within DDx Timeline calc mg/L COC discharged divs facility discharged within DDx Timeline calc mg/L COC discharged	
3.785 0.00001 643 PC88 2: 3.785 0.00001 DDx 11 3.785 0.00001	permit application (PAP-00050573) Liper gallon (Merck index) kg per mg (Merck index) calc kg CDC discharged #yrs facility discharged within PCBs Timeline calc mg/L CDC discharged Liper gallon (Merck index) kg per mg (Merck index) calc kg CDC discharged #yrs facility discharged within DDx Timeline calc mg/L CDC discharged Liper gallon (Merck index) calc kg CDC discharged Liper gallon (Merck index) kg per mg (Merck index)	
3.785 0.00001 643 PC88 2: 3.785 0.00001 DDx 11 3.785 0.00001	permit application (PAP-00050573) L per gallon (Merck Index) lag per mg (Merck Index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg coC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged	2000 permit application - "known to be absent" (PAP-00050571)
3.785 0.000001 PCBS 2: 3.785 0.000001 0.000001 10 3.785 0.000001 0.000001 10 10 10 10 10 10 10 10 10 10 10	permit application (PAP-00050573) Lper gallon (Merck index) kg per mg (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged within PCBs Timelline calc mg/L COC discharged Lper gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged within DDx Timelline calc mg/L COC discharged Lper gallon (Merck index) kg per mg (Merck index) calc kg COC discharged #yrs facility discharged within DDx Timelline calc mg/L COC discharged #yrs facility discharged within Discharged #yrs facility discharged within Discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged	2000 permit application - "known to be absent" (PAP-00050571)
3.785 0.00001 643 PCBS 2: 3.785 0.00001 10 0.00001 10 10 10 10 10 10 10 10 10 10 10 1	permit application (PAP-00050573) L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) discharged within DDx Timeline calc kg COC discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged L per gallon (Merck Index)	2000 permit application - "known to be absent" (PAP-00050571)
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3.785 0.00001 Dioxins/Furan Precursor - 2,4.5-T Dioxin/Furan Precursor - 2,4,5-T Dioxin/Furan Precursor - 2,4,6-TCP Dioxin/Furan Precursor - 2,4,6-TCP 1.5 1.785 0.000001 1.6 1.785 0.000001	permit application (PAP-00050573) Liper gallon (Merck Index) lag per mg (Merck Index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4,5-T Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged	2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571)
3.785 0.00001 DDX 11 3.785 0.000001 DDX 11 3.785 0.000001	permit application (PAP-00050573) Liper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) discharged within DDx Timeline calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) Liper gallon (Merck Index) Liper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged Liper gallon (Merck Index) kg per mg (Merck Index)	2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571)
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3.785 0.00001 Dixin/Furan Precursor - 2,4,5-TC Dioxin/Furan Precursor - 2,4,6-TCP Dioxin/Furan Precursor - 2,4,6-TCP 11 3.785 3.785 0.000001 12 3.785 0.000001 13 3.785 0.000001 14 3.785 0.000001 15 3.785 0.000001 16 3.785 0.000001 17 3.785 0.000001 18 3.785 0.000001 18 3.785 0.000001 18 3.785 0.000001	permit application (PAP-00050573) Liper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) kg Lead #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline kg COpper kg Loper kg Loper	2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571)
3.785 0.00001 Dixin/Furan Precursor - 2,4,5-TC Dioxin/Furan Precursor - 2,4,6-TCP Dioxin/Furan Precursor - 2,4,6-TCP 11 3.785 3.785 0.000001 12 3.785 0.000001 13 3.785 0.000001 14 3.785 0.000001 15 3.785 0.000001 16 3.785 0.000001 17 3.785 0.000001 18 3.785 0.000001 18 3.785 0.000001 18 3.785 0.000001	permit application (PAP-00050573) Liper gallon (Merck Index) lag per mg (Merck Index) lag per mg (Merck Index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) lag per mg (Merck Index) lag per mg (Merck Index) lag per mg (Merck Index) kg per mg (Merck Index) lag per mg (Merck	2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571)
3.785 0.00001 Dixin/Furan Precursor - 2,4,5-TC Dioxin/Furan Precursor - 2,4,6-TCP Dioxin/Furan Precursor - 2,4,6-TCP 11 3.785 3.785 0.000001 12 3.785 0.000001 13 3.785 0.000001 14 3.785 0.000001 15 3.785 0.000001 16 3.785 0.000001 17 3.785 0.000001 18 3.785 0.000001 18 3.785 0.000001 18 3.785 0.000001	permit application (PAP-00050573) Liper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged Liper gallon (Merck Index) kg per mg (Merck Index) kg Lead #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline kg COpper kg Loper kg Loper	2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571)
3.785 0.000001 0.00001	permit application (PAP-00050573) Liper gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within PCBs Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) calc kg COC discharged #yrs facility discharged within DDx Timeline calc mg/L COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged #yrs facility discharged within Dieldrin Timeline calc mg/L COC discharged #yrs facility discharged calc mg/L COC discharged #yrs facility discharged calc mg/L COC discharged L per gallon (Merck Index) calc kg COC discharged L per gallon (Merck Index) calc kg COC discharged L per gallon (Merck Index) calc kg D COC discharged L per gallon (Merck Index) calc kg D COC discharged L per gallon (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs facility discharged within 2,4,6-TCP Timeline calc mg/L COC discharged #yrs f	2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571)
3.785 0.000001 0.00001	permit application (PAP-00050573) Liper gallon (Merck Index) lag per mg (Merck Index) calc kg COC discharged #flys facility discharged within PCBs Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) lag per mg (Merck Index) calc kg COC discharged #flys facility discharged within DDx Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) lag per mg (Merck Index) lag per mg (Merck Index) lag per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged #flys facility discharged within Dieldrin Timeline calc mg/L COC discharged L per gallon (Merck Index) kg per mg (Merck Index) lag per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) calc kg COC discharged L per gallon (Merck Index) calc kg COC discharged L per gallon (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Index) calc kg COC discharged L per gallon (Merck Index) kg per mg (Merck Inde	2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571) 2000 permit application - "known to be absent" (PAP-00050571)

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Discharge Calcs	Direct DIscharge Information	COMMENTS/NOTES
	# hours/day discharged	
	#days/week discharged	Permit applications and surveys indicate storm water and other waste streams (e.g., boiler blowdown all piped to
		sanitary sewer); facility believes this was the case as early as 1948 (PAP-00054002, PAP-00054004, PAP-00050482, PAP-00050274, PAP-00054048, PAP-0005050504, PAP-00050571)
	#weeks/yr discharged	FAR-000302/4, FAR-00034046, FAR-00030304, FAR-000303/1)
	gals/yr directly discharged	
	g,,,	
4.08	ft; 30yr average annual precipitation per Rutgers information	
	acres;	
43,560	ft2 per acre	
	Yr Ops started (FDR) Yr Ops ceased (FDR)	
	calc #yrs facility operated	
32	care nyra raemey operated	
Copper (Cu)		
	#yrs facility discharged	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001		
Load (Dk)	calc kg COC discharged	
Lead (Pb)	#yrs facility discharged	
32	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Mercury (Hg)		
52	#yrs facility discharged	
4	calc mg/L COC discharged	
3.785 0.000001	L per gallon (Merck Index)	
0.00001	kg per mg (Merck Index) calc kg COC discharged	
HPAHs -	core ng coc discharged	
	#yrs facility discharged	
32	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
LPAHs		
52	#yrs facility discharged calc mg/L COC discharged	
3 785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
	calc kg COC discharged	
PCBs		
	#yrs facility discharged within PCBs Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx	#yrs facility discharged within DDx Timeline	
10	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
31	#yrs facility discharged within Dieldrin Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index) calc kg COC discharged	
Dioxins/Furans	core ng coo discriarged	
52	#yrs facility discharged	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D	Have facility disabound with the 2.4 S. Thereille	
53	#yrs facility discharged within 2,4-D Timeline calc mg/L COC discharged	
2 795	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	_
Dioxin/Furan Precursor - 2,4,5-T		
	#yrs facility discharged within 2,4,5-T Timeline	
	calc mg/L COC discharged	
	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
Dioxin/Furan Precursor - 2,4,6-TCP	calc kg COC discharged	
	#yrs facility discharged within 2,4,6-TCP Timeline	
15	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for Direct Discharge:		
-	kg Copper	
-	kg Lead	
-	kg Lead kg Mercury	
-	kg Lead kg Mercury kg HPAHs	
-	kg Lead kg Mercury kg HPAHs kg LPAHs	
-	kg Lead kg Mercury kg HPAHs	
-	kg Lead kg Mercury kg HPAHs kg LPAHs kg CPS kg DOS kg Dobt	
-	kg Lead kg Mercury kg HPAHs kg LPAHs kg LPABs kg PCBs	

BASF Catalyst formatted for report 2 ARR2 102 Direct_SW_Passaic

DISCHARGE CALCULATIONS 4		ASSUMPTIONS, REFERENCES Long term average annual precipitation includes floods and hurricane events occurring over time.	COMMENTS/NOTES Data from Rutgers University.				
	2.20 ACRES - TOTAL SITE AREA (acres) 2.10 ACRES - AFFECTED AREA	Total site area changed based on the revised FDR (FDR, p 1). Affected area based on corrected total site area and estimating the percentage of site covered by buildings in Figure 2-2 (PAP-00336027).	Manufacturer of precious metal coating product-ink, powder, and solution (PAP-00050571).				
4,046	5.86 METERS ² /ACRE						
	452 METERS ² (AFFECTED AREA)						
0.00	001 METERS/YEAR (ERODED SOIL THICKNESS)	For this estimate, used a surface soil erosion rate of 0.1 mm/year, or 0.004 inches/year.					
	0 METERS ³ /YEAR (ERODED SOIL VOLUME)	VOLUME/YEAR DISCHARGED					
19	957 Year site operations began	1					
		2009: Manufacturing operations ceased in May 2009 (PAP-00050655).	2010: The BASF Catalysts facility was demolished in				
	F3 AU INADED VEA DC DISCUADOS]	2010/2011 (PAP-00050655).				
	52 NUMBER YEARS DISCHARGE] -					
	23 METERS ³ (TOTAL SOIL VOLUME DISCHARGED OVER TIME)						
1,9	931 KG/M ³ SOIL DENSITY	Fill described as well graded sand and silty sand with gravel. Bulk density range 1378 KG/M ³ to 2483 KG/M ³ , so use average. (http://structx.com/Soil_Properties_002.html)					
44,€	687 KILOGRAMS (TOTAL SOIL DISCHARGED OVER TIME)	1					
Copper (Cu)		Copper was used in the production of precious and non-precious metal coatings	and metal salts at the facility (PAP-00050733-34).				
	52 YEARS DISCHARGED 588 MG/KG (MAX CONCENTRATION)	Max copper concentration in soil sample B-124 at 2 feet bgs (PAP-00053922)					
		Lead was used as an intermediate in the production of precious and non-precious 34).	us metal coatings and metal salts at the facility (PAP-00050733-				
1,4	52 YEARS DISCHARGED 400 MG/KG MAX CONCENTRATION)	Max lead concentration in soil boring B-30 at 4 to 4.5 feet bgs sampled (PAP-00050686)					
	001 kg per mg (Merck Index) 63 KILOGRAMS DISCHARGED						
	52 YEARS DISCHARGED 3.0 MG/KG (MAX CONCENTRATION)	Max mercury concentration in soil boring B-122 at 1.5 feet bgs (PAP-00053921).					
n nnn	001 kg per mg (Merck Index)						
	17 KILOGRAMS DISCHARGED	Benzo(a)pyrene Equivalent https://floridadep.gov/waste/petroleum-restoration/documents/benzo-pyrene-equivalents-conversion-table-one-sample.	MAX PAH ON PDF PAGE 121 (PAP-00053930)	Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
	52 YEARS DISCHARGED 0.6 MG/KG (TOTAL PAH MAX CONCENTRATION)			Benzo(a)pyrene	7.410	1.0	7.4100
0.0000	001 kg per mg (Merck Index)			Benzo(a)anthracene Benzo(b)fluoranthene	8.310 8.950	0.1	0.8310
PAHs (others detected)	0 KILOGRAMS DISCHARGED		OTHERS APPLY TEF = 0.01		3.540 8.370	0.01 0.001	0.0354 0.0084
75	52 YEARS DISCHARGED .37 MG/KG (TOTAL PAH MAX CONCENTRATION)	Sum of max PAH values (PAP-00053930, pdf page 121)		Dibenz(a,h)anthracene Indeno(1,2,3-cd)pyrene	1.010 4.440	1.0 0.1	1.0100 0.4440
0.0000 PCBs	001 kg per mg (Merck Index) 3 KILOGRAMS DISCHARGED			DE Residential = 0.1 mg/kg; DE		ene Equivalents =[10.6
		Shallow sample, Sample B-307-2 (2 ft bgs) (PAP-00053851, PAP-00053210 pdf p 146).					
DDx 0.0000	001 kg per mg (Merck Index) 0 KILOGRAMS DISCHARGED 0 YEARS DISCHARGED within DDx Timeline MG/KG (MAX CONCENTRATION) 001 kg per mg (Merck Index) 000 KILOGRAMS DISCHARGED	NONE REPORTED					

Dieldrin

0 YEARS DISCHARGED within Dieldrin Timeline MG/KG (MAX CONCENTRATION)

NONE REPORTED

0.000001 kg per mg (Merck Index) 0.00 KILOGRAMS DISCHARGED

Dioxins/Furans

52 YEARS DISCHARGED 0.0000 MG/KG (MAX CONCENTRATION)

0.000001 kg per mg (Merck Index)
0.0000 KILOGRAMS DISCHARGED

SUMMARY FTMASS ESTIMATES:

26.28 kg Copper 62.56 kg Lead

17.12 kg Mercury

0.48 kg PAHs (Benzo(a)pyrene Equivalent) 3.37 kg PAHs (Other)

0.02 kg PCBs

0.00 kg DDx

0.00 kg Dieldrin 0.00 kg Dioxins/Furans

109.82 MASS (KG) DISCHARGED FROM SURFACE SOIL

BASF Catalyst- Final.xlsx

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

Facility Base Scores, Culpability Factor, Cooperation Factor and Adapated Base Scores - Protocol Carculation

BASF Catalysts LLC

1 West Cen	ntral Aven	ue	East Newark	NJ	07032				
Facility BS	CUF	CUF_Catego			С	UF_NOTES	COF	COF_NOTES	Facility Adjusted BS
4.174E-6	10.0%	Periodic Noncom		violations, improper 1980s and 1990s; fir misused (PAP-00050 pH levels below 5.0 same violation on Ap the waste water trea	use of materials (PCBs, es were paid by the co 754). The facility receiv and one Administrative oril 9, 1995. The Admini	vil Penalties from NJDEP regarding air permit sodium nitrate), and waste manifest errors in the mpany. No information for how the PCB material was ed nine NOVs from PVSC and NJDEP (1994-1997) for Consent Order – Civil Penalty from NJDEP for the strative Consent Order facilitated the construction of ng correction, no further action was required on any COC violations		-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities	3.756E-6

AP_ABS

3.756E-6

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

Facility Base Scores, Culpability Factor, Cooperation Factor and Adapated Base Scores - Allocation Calculation

of them (PAP-00050757-59). Primarily non-COC violations

BASF Catalysts LLC

1 West Cer	itral Ave		ist ewark	NJ	0/032					
Facility BS	CUF	CUF_Category	ewark		(CUF_NOTES	СО	-	COF_NOTES	Facility
,						_			_	Adjusted BS
3.869E-3	10.0%	Periodic Noncompliac	vio 198	lations, improper use 80s and 1990s; fines	e of materials (PCBs were paid by the co	Civil Penalties from NJDEP regarding air pe s, sodium nitrate), and waste manifest erro ompany. No information for how the PCB ived nine NOVs from PVSC and NJDEP (199	ors in the material was	funding cooper	PG/SPG member - Continuous provision of gand participation in PRP Group(s) actions to ate with governmental/regulatory entities to senvironmental or public harm created by own	3.482E-3

pH levels below 5.0 and one Administrative Consent Order - Civil Penalty from NJDEP for the

same violation on April 9, 1995. The Administrative Consent Order facilitated the construction of the waste water treatment system. Following correction, no further action was required on any

AP_ABS

activities

3.482E-3